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=> d his ful

     (FILE 'HOME' ENTERED AT 17:44:30 ON 21 MAR 2006)

     FILE 'HCAPLUS' ENTERED AT 17:44:36 ON 21 MAR 2006
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L1          130 SEA ABB=ON  "BROWN WILLIAM"/AU
                E GRIFFIN ANDREW/AU
L2           27 SEA ABB=ON  "GRIFFIN ANDREW"/AU
L3           16 SEA ABB=ON  L1 AND L2
L4            5 SEA ABB=ON  L3 AND ?PIPERAZINYL?
                SELECT RN L4 4-5

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L5          231 SEA ABB=ON  (100-52-7/BI OR 1711-02-0/BI OR 77350-52-8/BI OR
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                103-72-0/BI OR 103-80-0/BI OR 106-38-7/BI OR 106-95-6/BI OR
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                109-89-7/BI OR 110-85-0/BI OR 1192-88-7/BI OR 120-92-3/BI OR
                122-78-1/BI OR 123-38-6/BI OR 127406-55-7/BI OR 1489-69-6/BI
                OR 1939-99-7/BI OR 2043-61-0/BI OR 2719-27-9/BI OR 288309-53-5/
                BI OR 331-25-9/BI OR 3350-30-9/BI OR 36865-41-5/BI OR 455-19-6/
                BI OR 477191-80-3/BI OR 498-60-2/BI OR 498-62-4/BI OR 502-42-1/
                BI OR 502-49-8/BI OR 52178-50-4/BI OR 5292-21-7/BI OR 5470-96-2
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                6482-24-2/BI OR 67-36-7/BI OR 691358-43-7/BI OR 691358-44-8/BI
                OR 691358-45-9/BI OR 691358-46-0/BI OR 691358-47-1/BI OR
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     FILE 'HCAPLUS' ENTERED AT 17:46:29 ON 21 MAR 2006
L6            5 SEA ABB=ON  L4 AND L5

     FILE 'REGISTRY' ENTERED AT 17:56:48 ON 21 MAR 2006
L7                STR
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L9          309 SEA SSS FUL L7

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L10           6 SEA ABB=ON  L9
L11           6 SEA ABB=ON  L10 AND (PRD<20050504 OR PD<20050504)
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6 citations CA Blue

FILE 'USPATFULL' ENTERED AT 18:02:11 ON 21 MAR 2006
L12 10 SEA ABB=ON L10 AND (PRD<20050504 OR PD<20050504) 10 cits from USPatFull

FILE HOME

FILE HCAPLUS

FILE COVERS 1907 - 21 Mar 2006 VOL 144 ISS 13
FILE LAST UPDATED: 20 Mar 2006 (20060320/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 MAR 2006 HIGHEST RN 877371-73-8
DICTIONARY FILE UPDATES: 20 MAR 2006 HIGHEST RN 877371-73-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

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* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

FILE USPATFULL

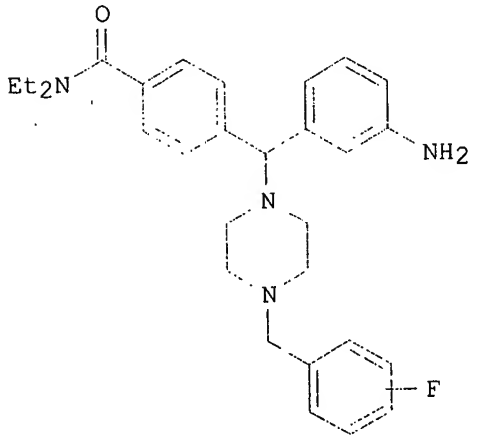
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 21 Mar 2006 (20060321/PD)
FILE LAST UPDATED: 21 Mar 2006 (20060321/ED)
HIGHEST GRANTED PATENT NUMBER: US7017190
HIGHEST APPLICATION PUBLICATION NUMBER: US2006059596
CA INDEXING IS CURRENT THROUGH 21 Mar 2006 (20060321/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 21 Mar 2006 (20060321/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2006
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2006

=> d ibib abs hitstr 16 1-5

L6 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:117149 HCAPLUS
DOCUMENT NUMBER: 144:212801
TITLE: Preparation of 1-benzyl-4-diarylmethylpiperazines as δ-opioid agonists.
INVENTOR(S): **Brown, William; Griffin, Andrew;** Hudzik, Thomas; Maciag, Carla; Smagin, Gennady; Walpole, Christopher
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006014133	A1	20060209	WO 2005-SE1186	20050727
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 2006030569	A1	20060209	US 2005-243623	20051005
PRIORITY APPLN. INFO.:			SE 2004-1968	A 20040802
			US 2004-602363P	P 20040818
			WO 2005-SE1186	A1 20050727

GI



I

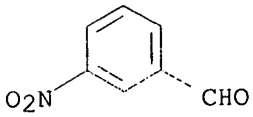
Balasubramanian Baraswaraman

Email

AB Title compds. (I) were prepared Thus, N,N-di-Et 4-[(R)-(3-nitrophenyl)(1-**piperazinyl**)methyl]benzamide (preparation given) was stirred with 4-fluorobenzaldehyde and Na(AcO)3BH were stirred 20 h in ClCH2CH2Cl to give 71% nitro intermediate, which was refluxed 24 h with Fe in EtOH/THF/aqueous NH4Cl to give 90% 4-[(R)-(3-aminophenyl)[4-(4-fluorobenzyl)piperazin-1-yl]methyl]-N,N-diethylbenzamide. This bound to delta receptors with IC50 = 0.587.

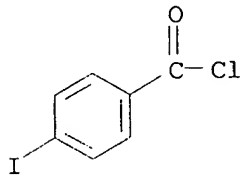
IT **99-61-6**, 3-Nitrobenzaldehyde **109-89-7**, Diethylamine, reactions **1711-02-0**, 4-Iodobenzoyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of benzyldiarylmethylpiperazines as δ-opioid agonists)

RN 99-61-6 HCAPLUS
CN Benzaldehyde, 3-nitro- (9CI) (CA INDEX NAME)



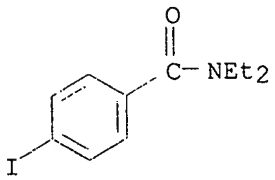
RN 109-89-7 HCAPLUS
CN Ethanamine, N-ethyl- (9CI) (CA INDEX NAME)

RN 1711-02-0 HCAPLUS
CN Benzoyl chloride, 4-iodo- (9CI) (CA INDEX NAME)

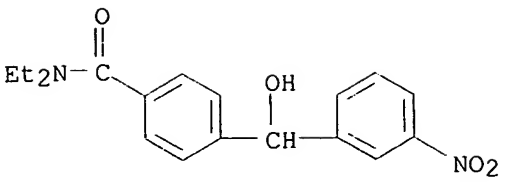


IT **77350-52-8P 691877-61-9P 691877-63-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of benzyldiarylmethylpiperazines as δ-opioid agonists)

RN 77350-52-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-iodo- (9CI) (CA INDEX NAME)

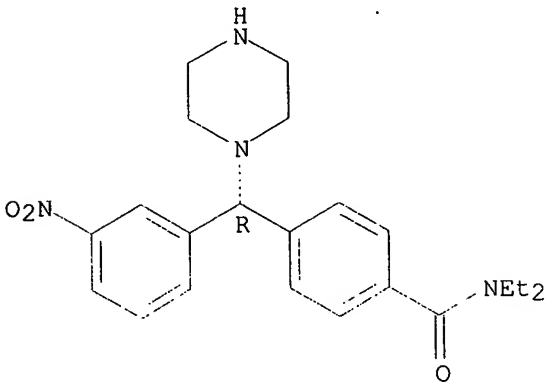


RN 691877-61-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[hydroxy(3-nitrophenyl)methyl]- (9CI) (CA INDEX NAME)



RN 691877-63-1 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:638860 HCAPLUS
DOCUMENT NUMBER: 143:153402
TITLE: Preparation of diarylmethylpiperazines as δ receptor ligands for the treatment of pain
INVENTOR(S): **Brown, William; Griffin, Andrew**
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005066148	A1	20050721	WO 2005-SE14	20050105

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: SE 2004-27 A 20040109

GI

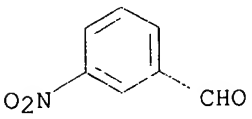
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [R1 = alkyl, alkenyl, cycloalkyl, etc.; R2 = H, alkyl, cycloalkyl, etc.; R3 = alkyl, cycloalkyl] and their pharmacetically acceptable salts were prepared For example, N-alkylation of piperazine II (R1 =H) with bromoethyl Me ether afforded the hCL salt of claimed diarylmethylpiperazine II (R1 = CH2CH2OCH3) in 68% yield. In human δ receptor assays, certain examples of compds. I exhibited IC50 values ranging from 0.2-3.7 nM, with an average of 1 nM (sic).

IT **99-61-6**, 3-Nitrobenzaldehyde **109-89-7**, reactions **110-85-0**, Piperazine, reactions **1711-02-0**, 4-Iodobenzoyl chloride **6482-24-2**, 2-Bromoethyl methyl ether **7051-34-5**, Bromomethylcyclopropane **36865-41-5**, 1-Bromo-3-methoxypropane RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of diarylmethylpiperazines as δ receptor ligands for treatment of pain)

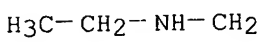
RN 99-61-6 HCAPLUS

CN Benzaldehyde, 3-nitro- (9CI) (CA INDEX NAME)



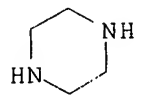
RN 109-89-7 HCAPLUS

CN Ethanamine, N-ethyl- (9CI) (CA INDEX NAME)



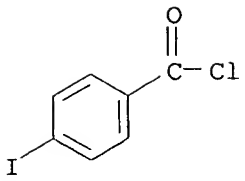
RN 110-85-0 HCAPLUS

CN Piperazine (8CI, 9CI) (CA INDEX NAME)

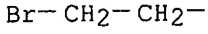


RN 1711-02-0 HCAPLUS

CN Benzoyl chloride, 4-iodo- (9CI) (CA INDEX NAME)



RN 6482-24-2 HCAPLUS
CN Ethane, 1-bromo-2-methoxy- (9CI) (CA INDEX NAME)



RN 7051-34-5 HCAPLUS
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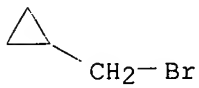

RN 36865-41-5 HCAPLUS
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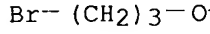
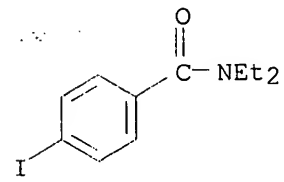
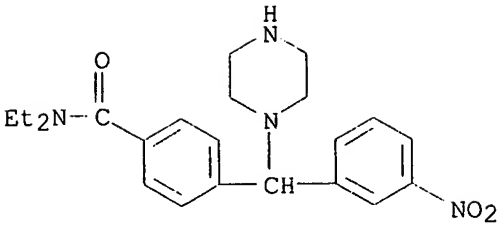


IT **77350-52-8P**, 4-Iodo-N,N-diethylbenzamide **477191-80-3P**, N,N-Diethyl-4-[(3-nitrophenyl)(1-**piperazinyl**)methyl]benzamide **691877-61-9P**, 4-[Hydroxy(3-nitrophenyl)methyl]-N,N-diethylbenzamide **691877-62-0P 691877-63-1P 691878-34-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of diarylmethylpiperazines as δ receptor ligands for treatment of pain)

RN 77350-52-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-iodo- (9CI) (CA INDEX NAME)



RN 477191-80-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)



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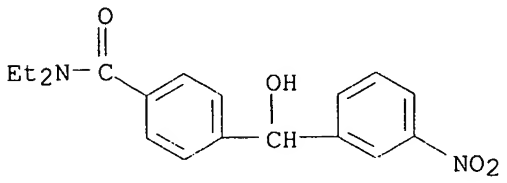
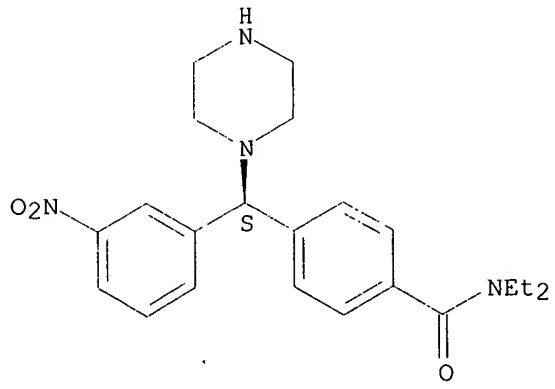


RN 691877-62-0 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 691877-63-1 HCAPLUS
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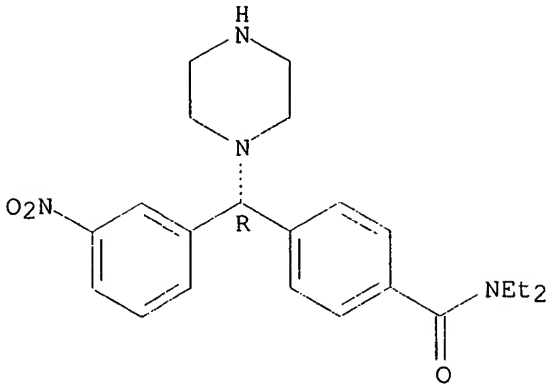
Absolute stereochemistry. Rotation (-).



RN 691878-34-9 HCAPLUS
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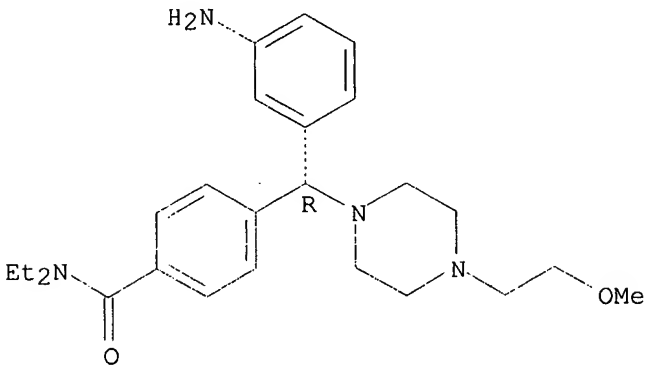
Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:412932 HCAPLUS
DOCUMENT NUMBER: 140:423709
TITLE: Preparation of N-[4-(**phenylpiperazinylmethyl**)phenyl]carbamates for treatment of pain, anxiety, or gastrointestinal disorders
INVENTOR(S): **Brown, William; Griffin, Andrew;** Jones, Paul; Page, Daniel; Plobeck, Niklas; Walpole, Christopher
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2004041802	A1	20040521	WO 2003-SE1707		20031105
WO 2004041802	C1	20050310			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2502732	AA	20040521	CA 2003-2502732		20031105
AU 2003278665	A1	20040607	AU 2003-278665		20031105
EP 1562924	A1	20050817	EP 2003-770198		20031105
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
BR 2003015995	A	20050927	BR 2003-15995		20031105
NO 2005002698	A	20050606	NO 2005-2698		20050606
PRIORITY APPLN. INFO.:			SE 2002-3303	A	20021107
			WO 2003-SE1707	W	20031105

OTHER SOURCE(S): MARPAT 140:423709
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

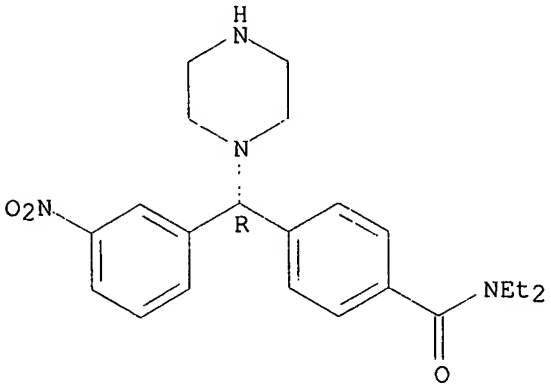
AB Title compds. I [wherein R1 = (un)substituted (hetero)aryl(alkyl); R2 and R3 = independently H or (un)substituted (cyclo)alkyl; or pharmaceutically acceptable salts, diastereomers, enantiomers, or mixts. thereof] were prepared as opioid δ receptor ligands. For example, 4-carboxybenzaldehyde was amidated with diethylamine using SOCl2 in CH2Cl2 to give N,N-diethyl-4-formylbenzamide (90%). Coupling of the amide with N-Boc-piperazine in the presence of benzotriazole in toluene, followed by reaction with 3-bromophenylzinc iodide in THF, afforded tert-Bu 4-[(3-bromophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]-1-piperazinecarboxylate (33%). Coupling with Me carbamate (62%) using xantphos, Cs2CO3, and Pd2(dba)3 in dioxane, deprotection (89%) with TFA in CH2Cl2, and chiral HPLC separation of the enantiomers provided (-)-[3-[[4-[(diethylamino)carbonyl]phenyl]-1-**piperazinylmethyl**]phenyl]carbamic acid Me ester. Reaction of the piperazine with benzaldehyde in the presence of NaBH(OAc)3 in CH2Cl2 gave (R)-II. In binding assays using human 293S cells expressing cloned human opioid receptors and neomycin resistance, (R)-II and ten other exemplified compds. exhibited strong binding to the δ receptor with IC50 values in the range of 0.25-0.74 nM and showed some activity toward the κ (IC50 = 247-1636 nM) and μ (IC50 = 93-1100 nM) receptors. In functional assays, (R)-II demonstrated δ receptor agonist activity by activating the binding of GTP to G-proteins. Thus, I and their pharmaceutical compns. are useful in therapy, in particular for the treatment of gastrointestinal disorders, anxiety, or pain (no data).

IT **691877-63-1P**
RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of N-[(**phenylpiperazinylmethyl**)phenyl]carbamates as δ receptor agonists for treatment of pain, anxiety, or gastrointestinal disorders)

RN 691877-63-1 HCAPLUS

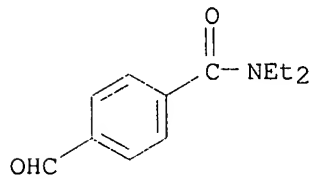
CN Benzamide, N,N-diethyl-4-[(R)-(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

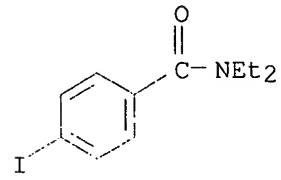


IT **58287-77-7P**, N,N-Diethyl-4-formylbenzamide **77350-52-8P**, 4-Iodo-N,N-diethylbenzamide **477191-80-3P**, N,N-Diethyl-4-[(3-nitrophenyl)(1-**piperazinyl**)methyl]benzamide **691877-61-9P**, 4-[Hydroxy(3-nitrophenyl)methyl]-N,N-diethylbenzamide **691877-64-2P 691877-65-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of N-[(**phenylpiperazinylmethyl**)phenyl]carbamates as δ receptor agonists for treatment of pain, anxiety, or gastrointestinal disorders)

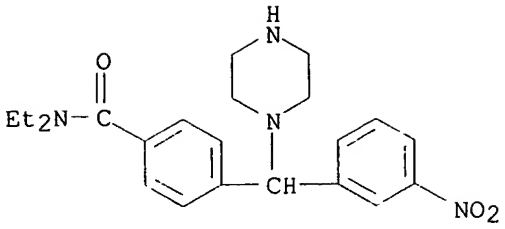
RN 58287-77-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-formyl- (9CI) (CA INDEX NAME)



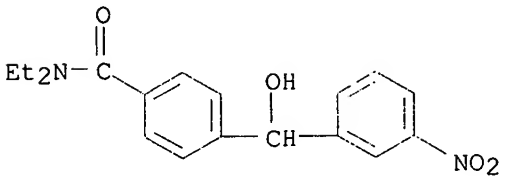
RN 77350-52-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-iodo- (9CI) (CA INDEX NAME)



RN 477191-80-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

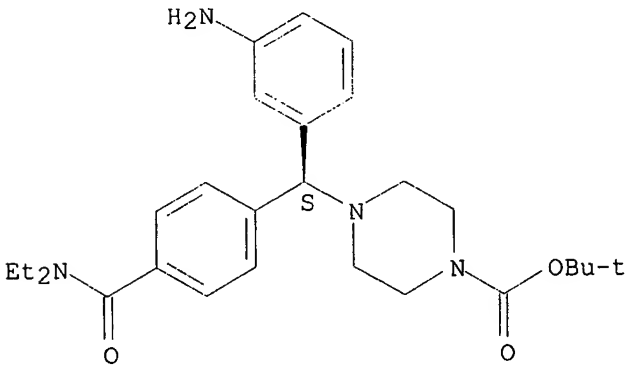


RN 691877-61-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[hydroxy(3-nitrophenyl)methyl]- (9CI) (CA INDEX NAME)



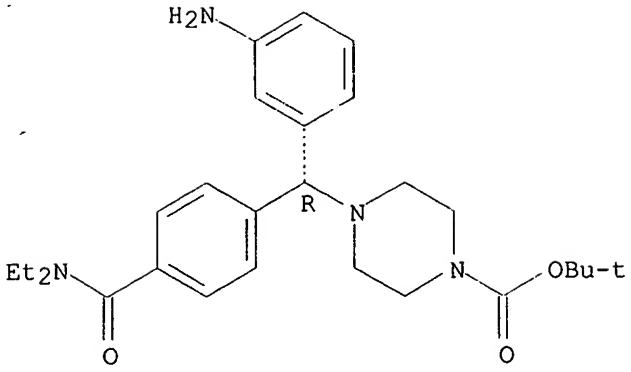
RN 691877-64-2 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[(S)-(3-aminophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



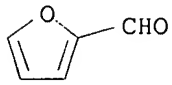
RN 691877-65-3 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[(R)-(3-aminophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

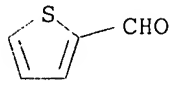


IT **98-01-1**, 2-Furaldehyde, reactions **98-03-3**, 2-Thiophenecarboxaldehyde **99-61-6**, 3-Nitrobenzaldehyde **100-52-7**, Benzaldehyde, reactions **109-89-7**, Diethylamine, reactions **110-85-0**, Piperazine, reactions **498-60-2**, 3-Furaldehyde **498-62-4**, 3-Thiophenecarboxaldehyde **619-66-9**, 4-Carboxybenzaldehyde **1711-02-0**, 4-Iodobenzoyl chloride **10200-59-6**, Thiazole-2-carboxaldehyde **57260-71-6**, N-Boc-piperazine **691877-62-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of N-[(**phenylpiperazinylmethyl**)phenyl]carbamates as δ receptor agonists for treatment of pain, anxiety, or gastrointestinal disorders)

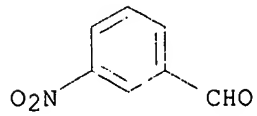
RN 98-01-1 HCAPLUS
CN 2-Furancarboxaldehyde (9CI) (CA INDEX NAME)



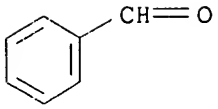
RN 98-03-3 HCAPLUS
CN 2-Thiophenecarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



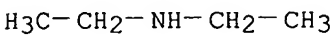
RN 99-61-6 HCAPLUS
CN Benzaldehyde, 3-nitro- (9CI) (CA INDEX NAME)



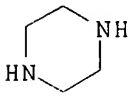
RN 100-52-7 HCAPLUS
CN Benzaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



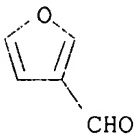
RN 109-89-7 HCAPLUS
CN Ethanamine, N-ethyl- (9CI) (CA INDEX NAME)



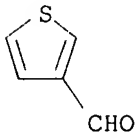
RN 110-85-0 HCAPLUS
CN Piperazine (8CI, 9CI) (CA INDEX NAME)



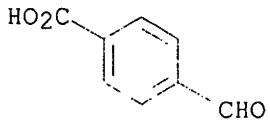
RN 498-60-2 HCAPLUS
CN 3-Furancarboxaldehyde (9CI) (CA INDEX NAME)



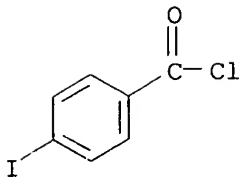
RN 498-62-4 HCAPLUS
CN 3-Thiophenecarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



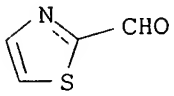
RN 619-66-9 HCAPLUS
CN Benzoic acid, 4-formyl- (9CI) (CA INDEX NAME)



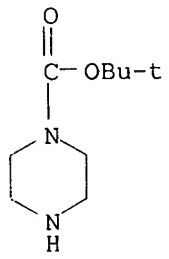
RN 1711-02-0 HCAPLUS
CN Benzoyl chloride, 4-iodo- (9CI) (CA INDEX NAME)



RN 10200-59-6 HCAPLUS
CN 2-Thiazolecarboxaldehyde (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

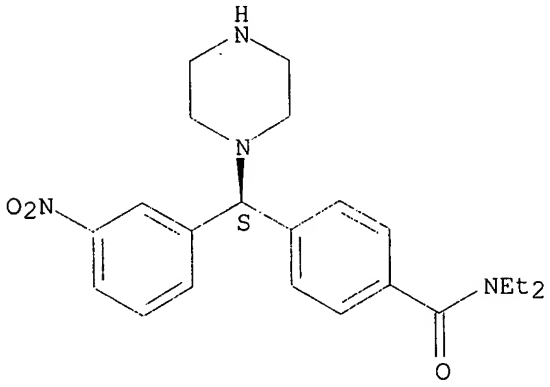


RN 57260-71-6 HCAPLUS
CN 1-Piperazinecarboxylic acid, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 691877-62-0 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L6 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:412931 HCAPLUS
DOCUMENT NUMBER: 140:423708
TITLE: Preparation of 4-(**phenylpiperazinylmethyl**

)benzamides for treatment of pain, anxiety, or gastrointestinal disorders

INVENTOR(S): **Brown, William; Griffin, Andrew**
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 127 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041801	A1	20040521	WO 2003-SE1706	20031105
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003278664	A1	20040607	AU 2003-278664	20031105
EP 1562923	A1	20050817	EP 2003-770197	20031105
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2006508946	T2	20060316	JP 2004-549775	20031105
PRIORITY APPLN. INFO.:			SE 2002-3302 A	20021107
			WO 2003-SE1706 W	20031105

OTHER SOURCE(S): MARPAT 140:423708
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [wherein R1 = (un)substituted alkyl or cycloalkyl(alkyl), (hetero)aryl, R8CO, R8SO2, R8SO, R8NHCO, R8CS, or R8NHCS; ; R2 = H or (un)substituted alkyl; R3 = H or (un)substituted alkoxycarbonyl, alkyl, or cycloalkyl(alkyl); R8 = (un)substituted alkyl, (hetero)aryl(alkyl), or cycloalkyl(alkyl); or pharmaceutically acceptable salts thereof] were prepared as opioid δ receptor ligands. For example, amidation of 4-iodobenzoyl chloride with Et2NH using TEA in CH2Cl2 provided 4-iodo-N,N-diethylbenzamide, which was coupled with 3-nitrobenzaldehyde in the presence of BuLi in THF to give 4-[hydroxy(3-nitrophenyl)methyl]-N,N-diethylbenzamide (50%). Reaction with thionyl bromide in CH2Cl2, followed by substitution with piperazine in MeCN and enantiomeric separation using di-p-toluoyl-D-tartaric acid, afforded N,N-diethyl-4-[(S)-(3-nitrophenyl)(1-**piperazinyl**)methyl]benzamide. N-protection with di-tert-Bu dicarbonate, alkylation with 2-thiazolecarboxaldehyde in the presence of Na triacetoxyborohydride in ClCH2CH2Cl, and deprotection using TFA gave (S)-II. In binding assays using human 293S cells expressing cloned human opioid receptors and neomycin resistance, most compds. of the invention exhibited activity toward the δ receptor with IC50 values in the range of 0.15 nM - 30.4 nM with an average of 2.30 nM. Exemplified compds. also showed some activity toward the κ and μ receptors with IC50 values in the ranges of 320 nM - 8457 nM and 16 nM - 9560 nM,

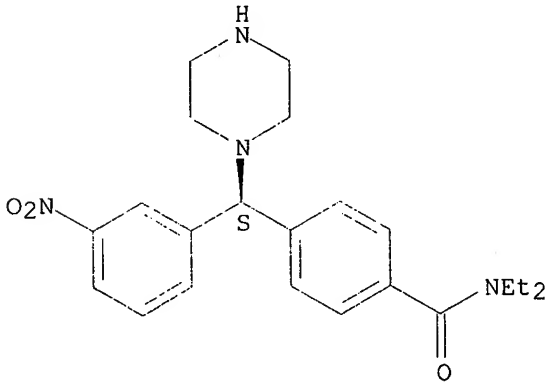
resp. Thus, I and their pharmaceutical compns. are useful in therapy, in particular for the treatment of gastrointestinal disorders, anxiety, or pain (no data).

IT **691877-62-0P**, (S)-N,N-Diethyl-4-[(3-nitrophenyl)(1-**piperazinyl**)methyl]benzamide **691877-63-1P**, (R)-N,N-Diethyl-4-[(3-nitrophenyl)(1-**piperazinyl**)methyl]benzamide
RL: PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain, anxiety, or gastrointestinal disorders)

RN 691877-62-0 HCAPLUS

CN Benzamide, N,N-diethyl-4-[(S)-(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

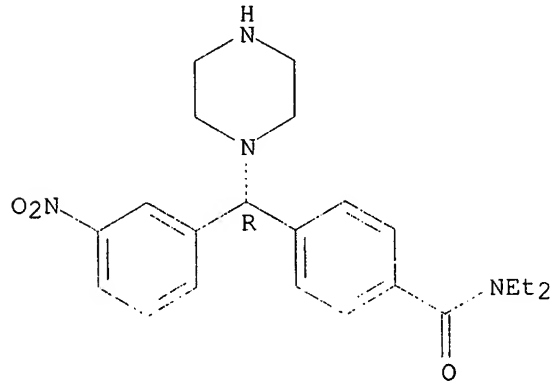
Absolute stereochemistry. Rotation (+).



RN 691877-63-1 HCAPLUS

CN Benzamide, N,N-diethyl-4-[(R)-(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

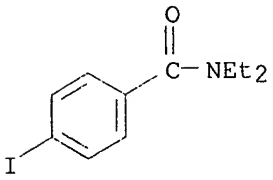
Absolute stereochemistry. Rotation (-).



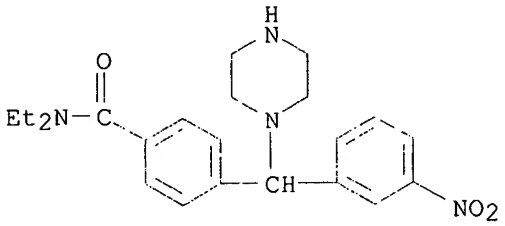
IT **77350-52-8P**, 4-Iodo-N,N-diethylbenzamide **477191-80-3P**, N,N-Diethyl-4-[(3-nitrophenyl)(1-**piperazinyl**)methyl]benzamide **691877-61-9P**, 4-[Hydroxy(3-nitrophenyl)methyl]-N,N-diethylbenzamide **691877-64-2P**, tert-Butyl (S)-4-[(3-

aminophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]piperazine-1-carboxylate **691877-65-3P**, tert-Butyl (R)-4-[(3-aminophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]piperazine-1-carboxylate **691877-66-4P**, tert-Butyl (R)-4-[(3-anilinophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]piperazine-1-carboxylate **691877-67-5P**, tert-Butyl (S)-4-[(3-anilinophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]piperazine-1-carboxylate **691878-43-0P**.
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain, anxiety, or gastrointestinal disorders)

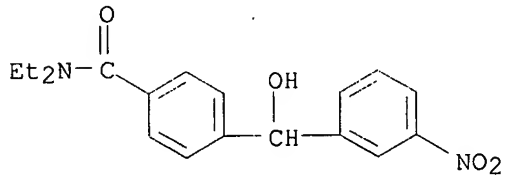
RN 77350-52-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-iodo- (9CI) (CA INDEX NAME)



RN 477191-80-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

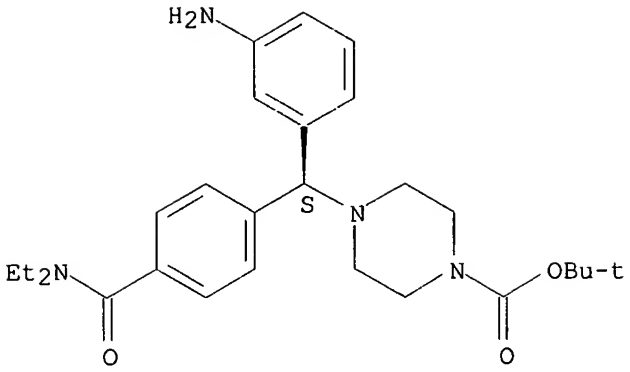


RN 691877-61-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[hydroxy(3-nitrophenyl)methyl]- (9CI) (CA INDEX NAME)



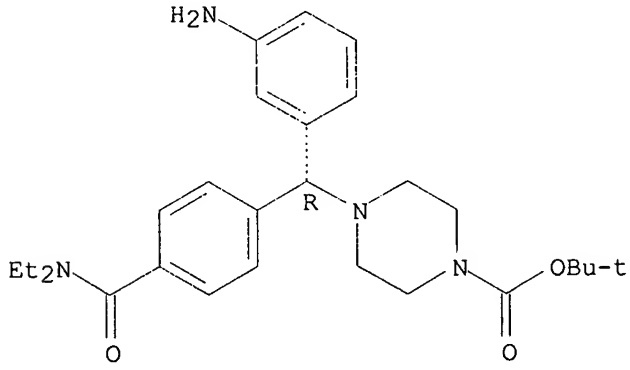
RN 691877-64-2 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[(S)-(3-aminophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



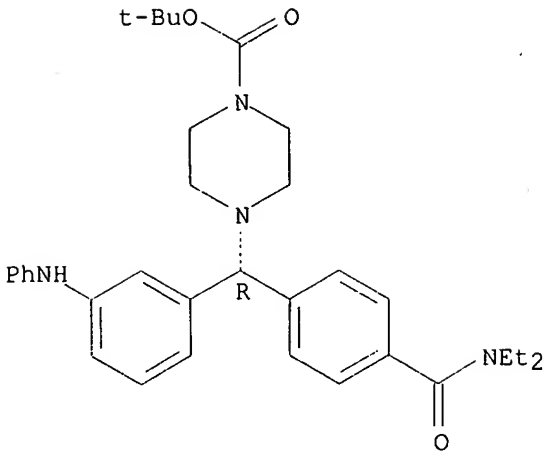
RN 691877-65-3 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[(R)-(3-aminophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



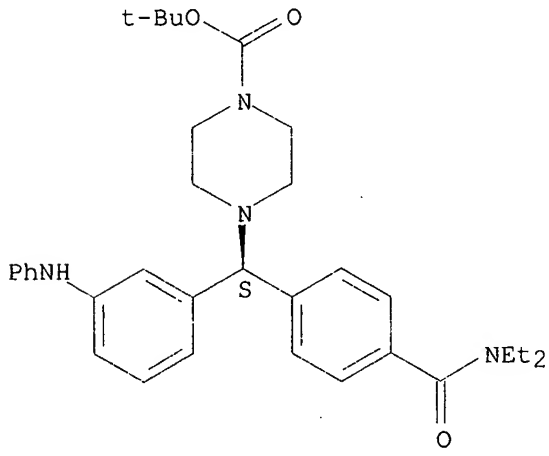
RN 691877-66-4 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[(R)-[4-[(diethylamino)carbonyl]phenyl][3-(phenylamino)phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



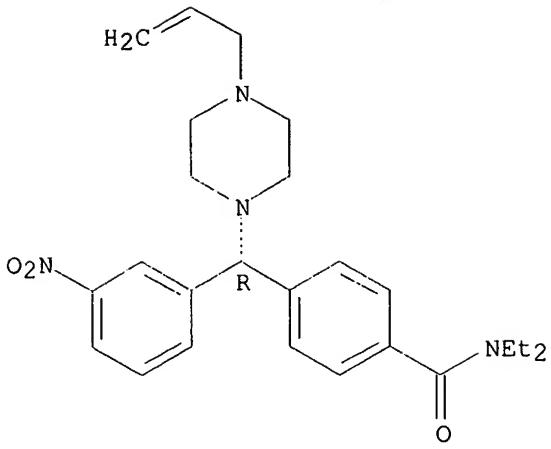
RN 691877-67-5 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[(S)-[4-[(diethylamino)carbonyl]phenyl][3-(phenylamino)phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



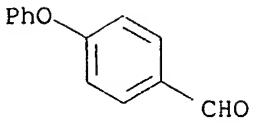
RN 691878-43-0 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-(3-nitrophenyl)[4-(2-propenyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

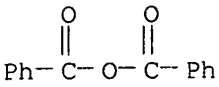


IT **67-36-7**, 4-Phenoxybenzaldehyde **93-97-0**, Benzoic anhydride **98-01-1**, 2-Furaldehyde, reactions **98-03-3**, 2-Thiophenecarboxaldehyde **98-89-5**, Cyclohexanecarboxylic acid **99-61-6**, 3-Nitrobenzaldehyde **100-52-7**, Benzaldehyde, reactions **103-71-9**, Phenyl isocyanate, reactions **103-72-0**, Phenyl isothiocyanate **103-80-0**, Phenylacetyl chloride **106-38-7**, 4-Bromotoluene **106-95-6**, Allyl bromide, reactions **108-37-2**, 3-Chlorobromobenzene **108-86-1**, Bromobenzene, reactions **108-94-1**, Cyclohexanone, reactions **110-85-0**, Piperazine, reactions **120-92-3**, Cyclopentanone **122-78-1**, Phenylacetaldehyde **123-38-6**, Propionaldehyde, reactions **331-25-9**, 3-Fluorophenylacetic acid **455-19-6**, 4-Trifluoromethylbenzaldehyde **498-60-2**, 3-Furaldehyde **498-62-4**, 3-Thiophenecarboxaldehyde **502-42-1**, Cycloheptanone **502-49-8**, Cyclooctanone **826-55-1**, α,α-Dimethylphenylacetic acid **870-63-3**, 1-Bromo-3-methylbut-2-ene **872-53-7**, Cyclopentanecarboxaldehyde **939-97-9**, 4-(1,1-Dimethylethyl)benzaldehyde **947-91-1**, Diphenylacetaldehyde **1072-85-1**, 2-Fluorobromobenzene **1192-88-7**, 1-Cyclohexene-1-carboxaldehyde **1489-69-6**, Cyclopropanecarboxaldehyde **1711-02-0**, 4-Iodobenzoyl chloride **1939-99-7**, α-Toluenesulfonyl chloride **2043-61-0**, Cyclohexanecarboxaldehyde **2719-27-9**, Cyclohexanecarbonyl chloride **3350-30-9**, Cyclononanone **5292-21-7**, Cyclohexylacetic acid **5470-96-2**, 2-Quinolinecarboxaldehyde **6482-24-2**, 2-Bromoethyl methyl ether **7051-34-5**, Bromomethylcyclopropane **10040-98-9**, 4-(1H-Imidazol-1-yl)benzaldehyde **10200-59-6**, Thiazole-2-carboxaldehyde **36865-41-5**, 1-Bromo-3-methoxypropane **127406-55-7**, 4-(3-Pyridinyl)benzaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain, anxiety, or gastrointestinal disorders)

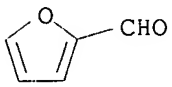
RN 67-36-7 HCAPLUS
CN Benzaldehyde, 4-phenoxy- (9CI) (CA INDEX NAME)



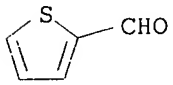
RN 93-97-0 HCAPLUS
CN Benzoic acid, anhydride (9CI) (CA INDEX NAME)



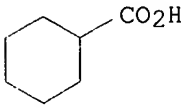
RN 98-01-1 HCAPLUS
CN 2-Furancarboxaldehyde (9CI) (CA INDEX NAME)



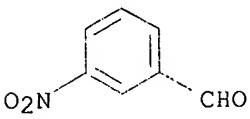
RN 98-03-3 HCAPLUS
CN 2-Thiophenecarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



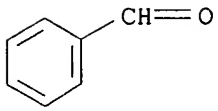
RN 98-89-5 HCAPLUS
CN Cyclohexanecarboxylic acid (6CI, 8CI, 9CI) (CA INDEX NAME)



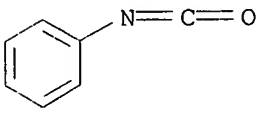
RN 99-61-6 HCAPLUS
CN Benzaldehyde, 3-nitro- (9CI) (CA INDEX NAME)



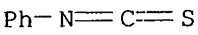
RN 100-52-7 HCAPLUS
CN Benzaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



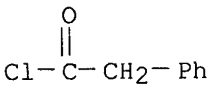
RN 103-71-9 HCAPLUS
CN Benzene, isocyanato- (9CI) (CA INDEX NAME)



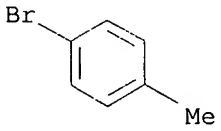
RN 103-72-0 HCAPLUS
CN Benzene, isothiocyanato- (9CI) (CA INDEX NAME)



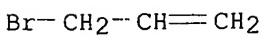
RN 103-80-0 HCAPLUS
CN Benzeneacetyl chloride (9CI) (CA INDEX NAME)



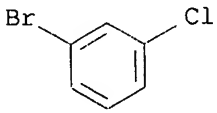
RN 106-38-7 HCAPLUS
CN Benzene, 1-bromo-4-methyl- (9CI) (CA INDEX NAME)



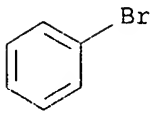
RN 106-95-6 HCAPLUS
CN 1-Propene, 3-bromo- (9CI) (CA INDEX NAME)



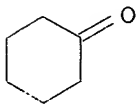
RN 108-37-2 HCAPLUS
CN Benzene, 1-bromo-3-chloro- (6CI, 8CI, 9CI) (CA INDEX NAME)



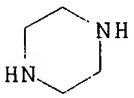
RN 108-86-1 HCAPLUS
CN Benzene, bromo- (8CI, 9CI) (CA INDEX NAME)



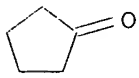
RN 108-94-1 HCAPLUS
CN Cyclohexanone (7CI, 8CI, 9CI) (CA INDEX NAME)



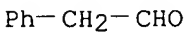
RN 110-85-0 HCAPLUS
CN Piperazine (8CI, 9CI) (CA INDEX NAME)



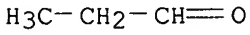
RN 120-92-3 HCAPLUS
CN Cyclopentanone (8CI, 9CI) (CA INDEX NAME)



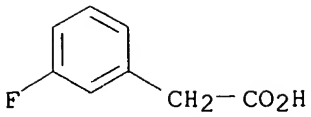
RN 122-78-1 HCAPLUS
CN Benzeneacetaldehyde (9CI) (CA INDEX NAME)



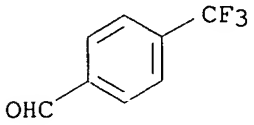
RN 123-38-6 HCAPLUS
CN Propanal (9CI) (CA INDEX NAME)



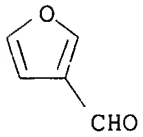
RN 331-25-9 HCAPLUS
CN Benzeneacetic acid, 3-fluoro- (9CI) (CA INDEX NAME)



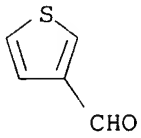
RN 455-19-6 HCAPLUS
CN Benzaldehyde, 4-(trifluoromethyl)- (9CI) (CA INDEX NAME)



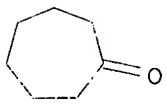
RN 498-60-2 HCAPLUS
CN 3-Furancarboxaldehyde (9CI) (CA INDEX NAME)



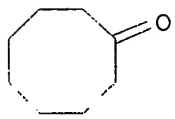
RN 498-62-4 HCAPLUS
CN 3-Thiophenecarboxaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 502-42-1 HCAPLUS
CN Cycloheptanone (8CI, 9CI) (CA INDEX NAME)

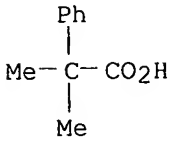


RN 502-49-8 HCAPLUS
CN Cyclooctanone (8CI, 9CI) (CA INDEX NAME)

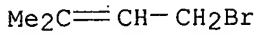


RN 826-55-1 HCAPLUS

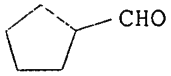
CN Benzeneacetic acid, α,α-dimethyl- (9CI) (CA INDEX NAME)



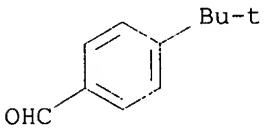
RN 870-63-3 HCAPLUS
CN 2-Butene, 1-bromo-3-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



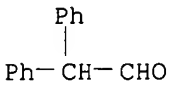
RN 872-53-7 HCAPLUS
CN Cyclopentanecarboxaldehyde (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



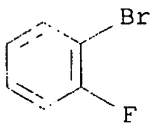
RN 939-97-9 HCAPLUS
CN Benzaldehyde, 4-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



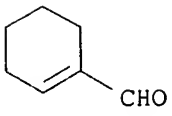
RN 947-91-1 HCAPLUS
CN Benzeneacetaldehyde, α-phenyl- (9CI) (CA INDEX NAME)



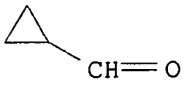
RN 1072-85-1 HCAPLUS
CN Benzene, 1-bromo-2-fluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



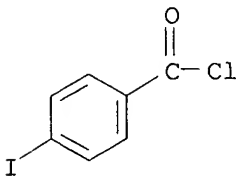
RN 1192-88-7 HCAPLUS
CN 1-Cyclohexene-1-carboxaldehyde (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



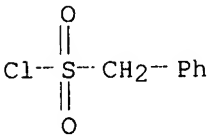
RN 1489-69-6 HCAPLUS
CN Cyclopropanecarboxaldehyde (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



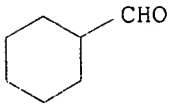
RN 1711-02-0 HCAPLUS
CN Benzoyl chloride, 4-iodo- (9CI) (CA INDEX NAME)



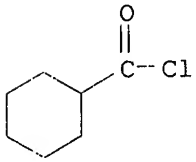
RN 1939-99-7 HCAPLUS
CN Benzenemethanesulfonyl chloride (9CI) (CA INDEX NAME)



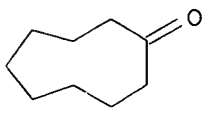
RN 2043-61-0 HCAPLUS
CN Cyclohexanecarboxaldehyde (6CI, 8CI, 9CI) (CA INDEX NAME)



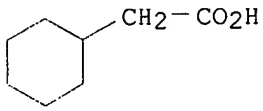
RN 2719-27-9 HCAPLUS
CN Cyclohexanecarbonyl chloride (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



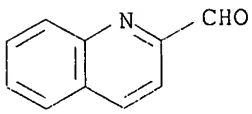
RN 3350-30-9 HCAPLUS
CN Cyclononanone (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



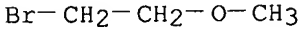
RN 5292-21-7 HCAPLUS
CN Cyclohexaneacetic acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



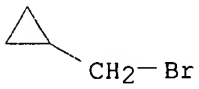
RN 5470-96-2 HCAPLUS
CN 2-Quinolinecarboxaldehyde (9CI) (CA INDEX NAME)



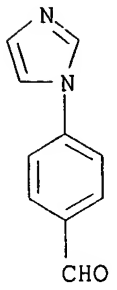
RN 6482-24-2 HCAPLUS
CN Ethane, 1-bromo-2-methoxy- (9CI) (CA INDEX NAME)



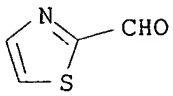
RN 7051-34-5 HCAPLUS
CN Cyclopropane, (bromomethyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 10040-98-9 HCAPLUS
CN Benzaldehyde, 4-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)

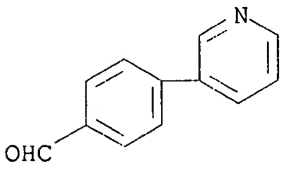


RN 10200-59-6 HCAPLUS
CN 2-Thiazolecarboxaldehyde (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



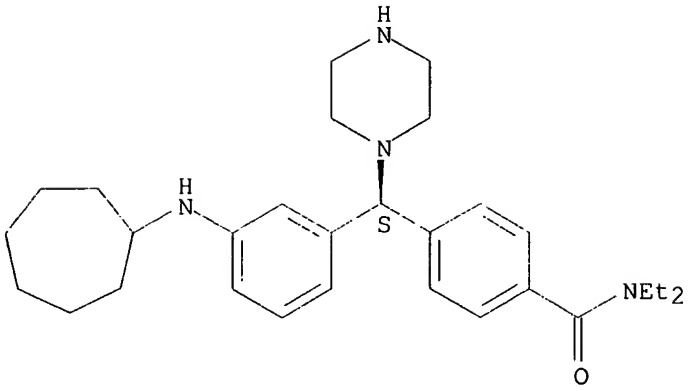
RN 36865-41-5 HCAPLUS
CN Propane, 1-bromo-3-methoxy- (9CI) (CA INDEX NAME)

RN 127406-55-7 HCAPLUS
CN Benzaldehyde, 4-(3-pyridinyl)- (9CI) (CA INDEX NAME)



IT **691878-39-4P**, (S)-4-[[3-(Cycloheptylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(δ receptor agonist; 00000prepn. of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain, anxiety, or gastrointestinal disorders)
RN 691878-39-4 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cycloheptylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT **691877-84-6P**, (S)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(1,3-thiazol-2-ylmethyl)amino]phenyl]methyl]benzamide trifluoroacetate (1:1.6) **691877-93-7P**, (S)-4-[[3-(Cyclohexylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-16-7P**, (S)-N,N-Diethyl-4-[(1-**piperazinyl**)[3-(propylamino)phenyl]methyl]benzamide trifluoroacetate (1:2.4) **691878-17-8P**, (S)-4-[[3-(Dipropylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate **691878-18-9P**, (R)-N,N-Diethyl-4-[(1-**piperazinyl**)[3-(propylamino)phenyl]methyl]benzamide **691878-20-3P**, (R)-N,N-Diethyl-4-[(1-**piperazinyl**)[3-(propylamino)phenyl]methyl]benzamide trifluoroacetate (1:3.6) **691878-22-5P**, (S)-N,N-Diethyl-4-[(1-**piperazinyl**)[3-[[[4-(3-pyridinyl)phenyl]methyl]amino]phenyl]methyl]benzamide trifluoroacetate (1:3.3) **691878-24-7P**, (S)-N,N-Diethyl-4-[[3-[[[4-(1H-imidazol-1-yl)phenyl]methyl]amino]phenyl]piperazin-1-ylmethyl]benzamide trifluoroacetate (1:3) **691878-26-9P**, (S)-N,N-Diethyl-4-[(1-**piperazinyl**)[3-[(2-quinolinylmethyl)amino]phenyl]methyl]benzamide trifluoroacetate (1:3.6) **691878-28-1P**, (R)-4-[[3-[(2,2-Diphenylethyl)amino]phenyl]piperazin-1-ylmethyl]-N,N-diethylbenzamide trifluoroacetate (1:2.8) **691878-30-5P 691878-32-7P**, (R)-N,N-Diethyl-4-[[3-[[(4-phenoxyphenyl)methyl]amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:2.3) **691878-34-9P**, (R)-4-[(3-Aminophenyl)[4-(2-methoxyethyl)piperazin-1-yl]methyl]-N,N-diethylbenzamide **691878-35-0P**, (R)-4-[(3-Aminophenyl)[4-(3-methoxypropyl)piperazin-1-yl]methyl]-N,N-diethylbenzamide **691878-38-3P**, (R)-N,N-Diethyl-4-[[4-(3-methoxypropyl)-1-**piperazinyl**][3-(propylamino)phenyl]methyl]benzamide trifluoroacetate (1:2) **691878-42-9P**, (R)-4-[(3-Aminophenyl)[4-(2-propenyl)-1-**piperazinyl**]methyl]-N,N-diethylbenzamide **691878-44-1P**, (R)-4-[(3-Aminophenyl)[4-(3-methyl-2-butenyl)-1-**piperazinyl**]methyl]-N,N-diethylbenzamide **691878-45-2P**, (R)-4-[(3-Aminophenyl)[4-(cyclopropylmethyl)-1-**piperazinyl**]methyl]-N,N-diethylbenzamide **691878-61-2P**, (R)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(1,3-thiazol-2-ylmethyl)amino]phenyl]methyl]benzamide trifluoroacetate (1:2.4) **691878-62-3P**, (S)-4-[[3-(Benzylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.6) **691878-63-4P**, (R)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(thien-2-ylmethyl)amino]phenyl]methyl]benzamide trifluoroacetate (1:2) **691878-64-5P**, (S)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(thien-2-ylmethyl)amino]phenyl]methyl]benzamide trifluoroacetate (1:3) **691878-65-6P**, (S)-N,N-Diethyl-4-[[3-[(2-

furylmethyl)amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:2.5) **691878-66-7P**, (R)-N,N-Diethyl-4-[[3-[(2-furylmethyl)amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:3) **691878-67-8P**, (R)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(thien-3-ylmethyl)amino]phenyl]methyl]benzamide trifluoroacetate (1:2) **691878-68-9P**, (S)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(thien-3-ylmethyl)amino]phenyl]methyl]benzamide trifluoroacetate (1:2.8) **691878-69-0P**, (R)-N,N-Diethyl-4-[[3-[(3-furylmethyl)amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:1.8) **691878-70-3P**, (R)-N,N-Diethyl-4-[[3-[(2-phenylethyl)amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:1.9) **691878-71-4P**, (R)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(4-trifluoromethylbenzyl)amino]phenyl]methyl]benzamide trifluoroacetate (1:1.4) **691878-72-5P**, (S)-4-[[3-[(Cyclohexylmethyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.8) **691878-73-6P**, (R)-4-[[3-[(Cyclohex-1-en-1-ylmethyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.9) **691878-75-8P 691878-76-9P**, (R)-4-[[3-(Cyclopentylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.6) **691878-77-0P 691878-78-1P**, (R)-4-[[3-(Cyclooctylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.6) **691878-79-2P**, (R)-4-[[3-(Cyclononylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.6) **691878-80-5P**, (S)-4-[[3-(Cyclohexylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.5) **691878-81-6P**, (R)-4-[[3-(Benzoylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:1.6) **691878-82-7P**, (R)-N,N-Diethyl-4-[[3-[(phenylacetyl)amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:0.9) **691878-83-8P**, (S)-4-[[3-(Benzoylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:1.9) **691878-84-9P**, (S)-N,N-Diethyl-4-[[3-[(phenylacetyl)amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:1.8) **691878-85-0P**, (R)-N,N-Diethyl-4-[[3-[(2-methyl-2-phenylpropanoyl)amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:1.5) **691878-86-1P**, (R)-N,N-Diethyl-4-[[3-[[(3-fluorophenyl)acetyl]amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:1.4) **691878-87-2P**, (R)-4-[[3-[(Benzylsulfonyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:0.6) **691878-89-4P**, (S)-N,N-Diethyl-4-[[3-[(phenylsulfonyl)amino]phenyl](piperazin-1-yl)methyl]benzamide trifluoroacetate (1:1.9) **691878-90-7P**, (R)-4-[[3-[(Anilinocarbonyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2) **691878-91-8P**, (R)-4-[[3-(Dipropylamino)(piperazin-1-yl)phenyl]methyl]-N,N-diethylbenzamide trifluoroacetate (1:4.2) **691878-92-9P**, (R)-N,N-Diethyl-4-[[4-(2-propenyl)-1-**piperazinyl**][3-(propylamino)phenyl]methyl]benzamide trifluoroacetate (1:2.7) **691878-93-0P**, (R)-4-[(3-Aminophenyl)[4-(2-methoxyethyl)piperazin-1-yl]methyl]-N,N-diethylbenzamide hydrochloride (1:3.2) **691878-94-1P**, (R)-4-[(3-Aminophenyl)[4-(3-methoxypropyl)piperazin-1-yl]methyl]-N,N-diethylbenzamide tetrahydrochloride **691878-95-2P**, (R)-N,N-Diethyl-4-[[4-(2-methoxyethyl)-1-**piperazinyl**][3-(propylamino)phenyl]methyl]benzamide trifluoroacetate (1:2.6) **691878-96-3P**, (S)-4-[[3-(Cycloheptylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.9) **691878-97-4P**, (S)-4-[[3-(Cyclooctylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.8) **691878-98-5P**, (R)-4-[(3-Aminophenyl)[4-(2-propenyl)-1-

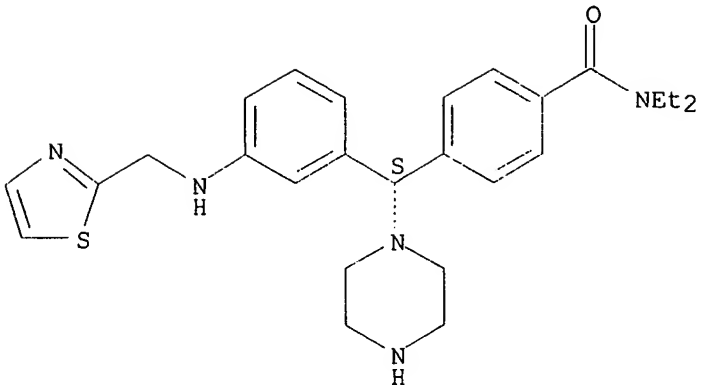
piperazinyl]methyl]-N,N-diethylbenzamide trihydrochloride **691878-99-6P**, (R)-4-[(3-Aminophenyl)[4-(3-methyl-2-butenyl)-1-**piperazinyl**]methyl]-N,N-diethylbenzamide hydrochloride (1:3.8) **691879-00-2P**, (R)-N,N-Diethyl-4-[[4-(2-propenyl)-1-**piperazinyl**][3-[[(2-thienyl)methyl]amino]phenyl]methyl]benzamide trifluoroacetate (1:2.3) **691879-01-3P**, (R)-N,N-Diethyl-4-[[4-(3-methyl-2-butenyl)-1-**piperazinyl**][3-[[(2-thienyl)methyl]amino]phenyl]methyl]benzamide trifluoroacetate (1:1.4) **691879-02-4P**, (R)-4-[[4-(Cyclopropylmethyl)-1-**piperazinyl**][3-[(2-thienylmethyl)amino]phenyl]methyl]-N,N-diethylbenzamide trifluoroacetate (1:2.4) **691879-03-5P**, (S)-4-[[3-(Cyclohexylamino)phenyl][4-(cyclopropylmethyl)piperazin-1-yl]methyl]-N,N-diethylbenzamide hydrochloride (1:3.2) **691879-04-6P**, (S)-4-[[3-(Cyclohexylamino)phenyl](4-propylpiperazin-1-yl)methyl]-N,N-diethylbenzamide hydrochloride (1:4.3) **691879-05-7P**, (S)-4-[[3-(Cyclohexylamino)phenyl](4-ethylpiperazin-1-yl)methyl]-N,N-diethylbenzamide pentahydrochoride **691879-06-8P**, (S)-4-[(4-Allylpiperazin-1-yl)[3-(cyclohexylamino)phenyl]methyl]-N,N-diethylbenzamide hydrochloride (1:4.4) **691879-07-9P**, (S)-4-[[3-[(Cyclohexylcarbonyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide tetrahydrochloride **691879-08-0P**, (S)-4-[[3-[(Cyclohexylacetyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide hydrochloride (1:0.4) **691879-09-1P**, (S)-4-[[3-[Cyclohexyl(methyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide hydrochloride (1:4.1) **691879-10-4P**, (R)-4-[[3-[Cyclohexyl(methyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide hydrochloride (1:4.8) **691879-17-1P**, (R)-4-[(3-Aminophenyl)[4-(cyclopropylmethyl)-1-**piperazinyl**]methyl]-N,N-diethylbenzamide hydrochloride (1:3.8) **693259-21-1P**, (R)-4-[[3-(Benzylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trifluoroacetate (1:1.8)
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(δ receptor agonist; preparation of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain, anxiety, or gastrointestinal disorders)

RN 691877-84-6 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[(2-thiazolylmethyl)amino]phenyl]methyl]-, trifluoroacetate (5:8) (9CI) (CA INDEX NAME)

CM 1

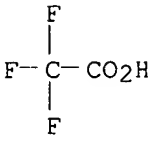
CRN 691877-68-6
CMF C26 H33 N5 O S

Absolute stereochemistry.



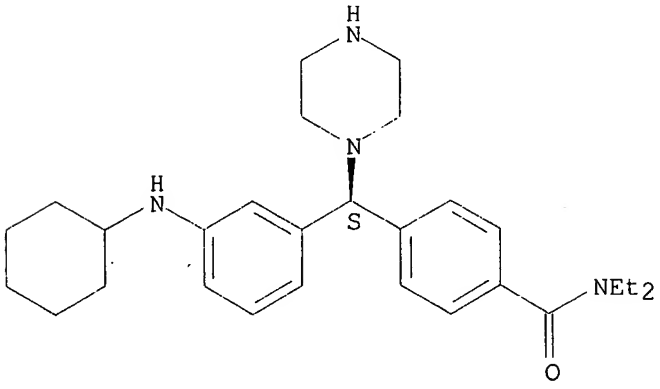
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 691877-93-7 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



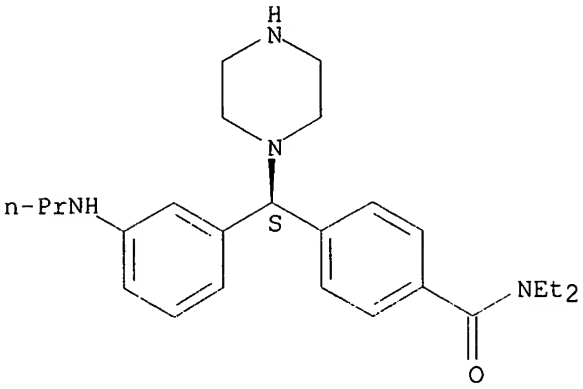
RN 691878-16-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-(propylamino)phenyl]methyl]-, trifluoroacetate (5:12) (9CI) (CA INDEX NAME)

CM 1

CRN 691878-14-5

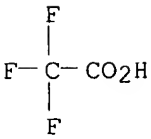
CMF C25 H36 N4 O

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

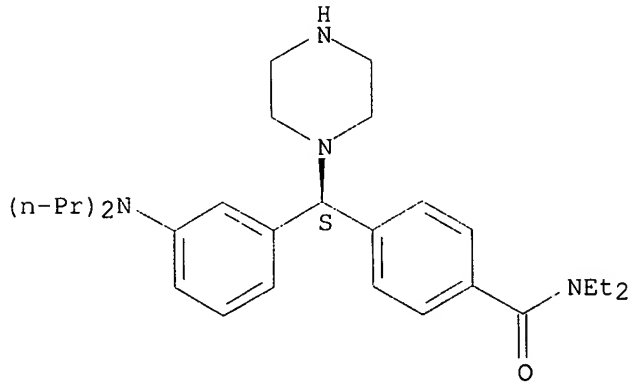


RN 691878-17-8 HCAPLUS
CN Benzamide, 4-[(S)-[3-(dipropylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

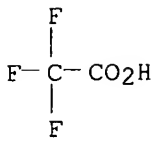
CRN 691878-15-6
CMF C28 H42 N4 O

Absolute stereochemistry.



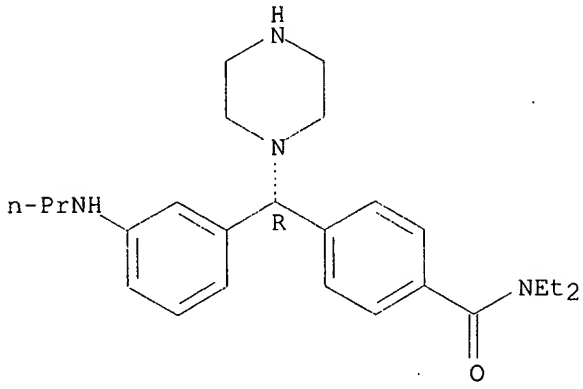
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 691878-18-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-(propylamino)phenyl]methyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

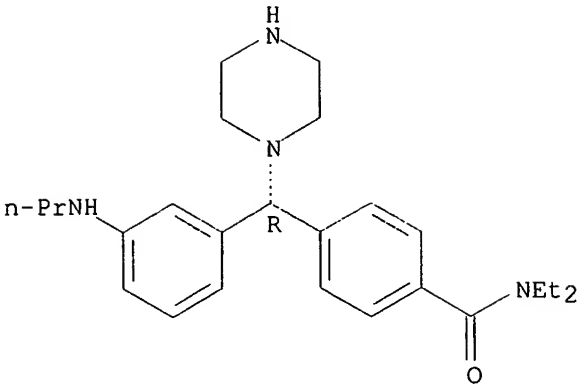


RN 691878-20-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-(propylamino)phenyl]methyl]-, trifluoroacetate (5:18) (9CI) (CA INDEX NAME)

CM 1

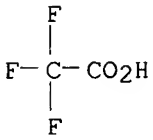
CRN 691878-18-9
CMF C25 H36 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

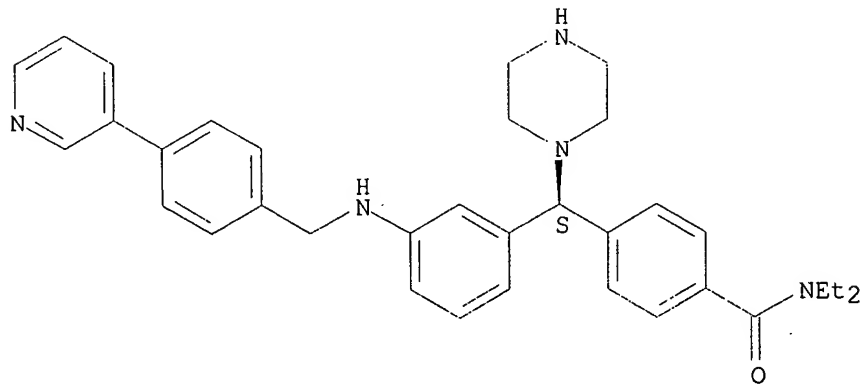


RN 691878-22-5 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[[[4-(3-pyridinyl)phenyl]methyl]amino]phenyl]methyl]-, trifluoroacetate (10:33) (9CI) (CA INDEX NAME)

CM 1

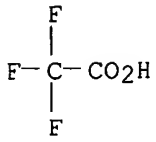
CRN 691878-21-4
CMF C34 H39 N5 O

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

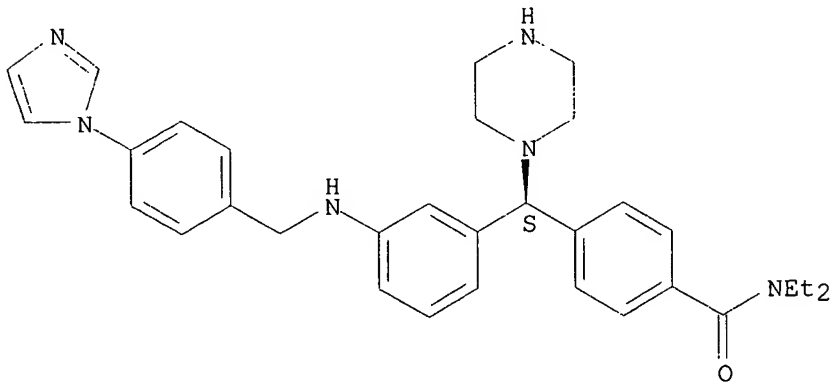


RN 691878-24-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[[[4-(1H-imidazol-1-yl)phenyl]methyl]amino]phenyl]-1-piperazinylmethyl]-, tris(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

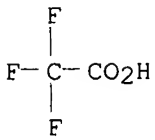
CRN 691878-23-6
CMF C32 H38 N6 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

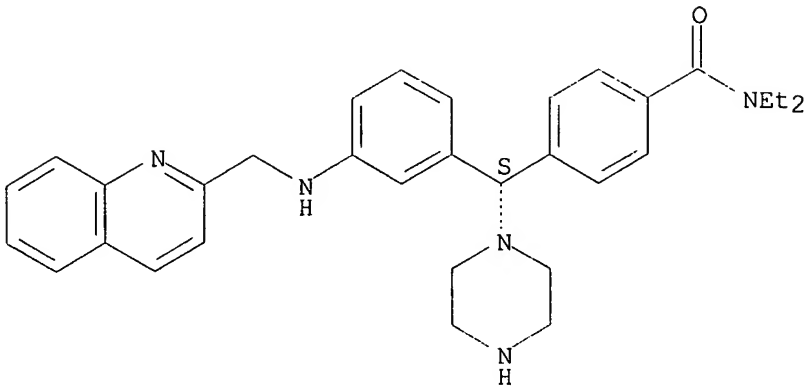


RN 691878-26-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[(2-quinolinylmethyl)amino]phenyl]methyl]-, trifluoroacetate (5:18) (9CI) (CA INDEX NAME)

CM 1

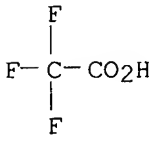
CRN 691878-25-8
CMF C32 H37 N5 O

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

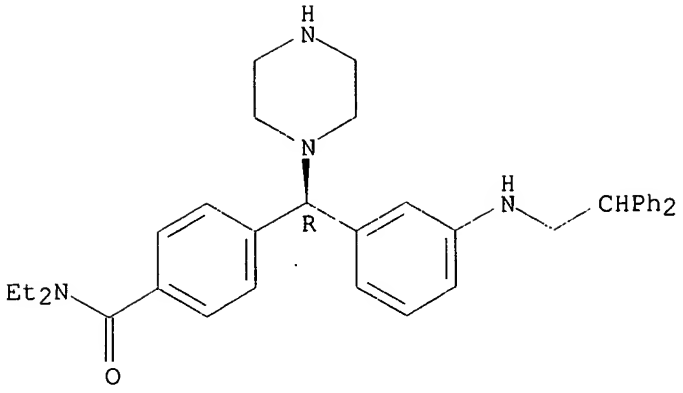


RN 691878-28-1 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(2,2-diphenylethyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (5:14) (9CI) (CA INDEX NAME)

CM 1

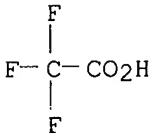
CRN 691878-27-0
CMF C36 H42 N4 O

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

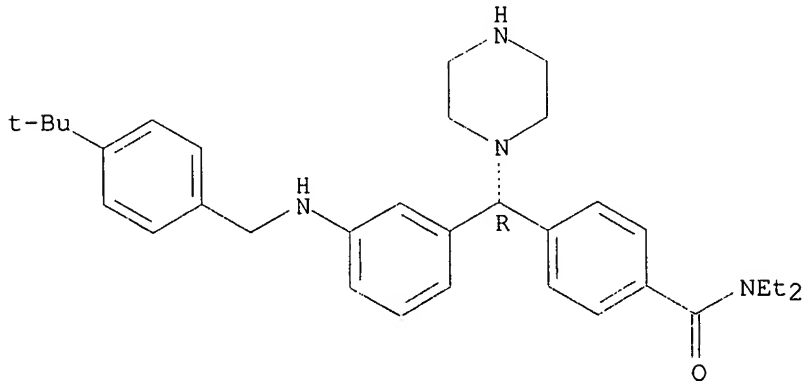


RN 691878-30-5 HCAPLUS
CN Benzamide, 4-[(R)-[3-[[[4-(1,1-dimethylethyl)phenyl]methyl]amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (5:21) (9CI) (CA INDEX NAME)

CM 1

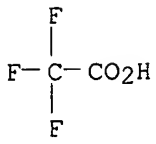
CRN 691878-29-2
CMF C33 H44 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

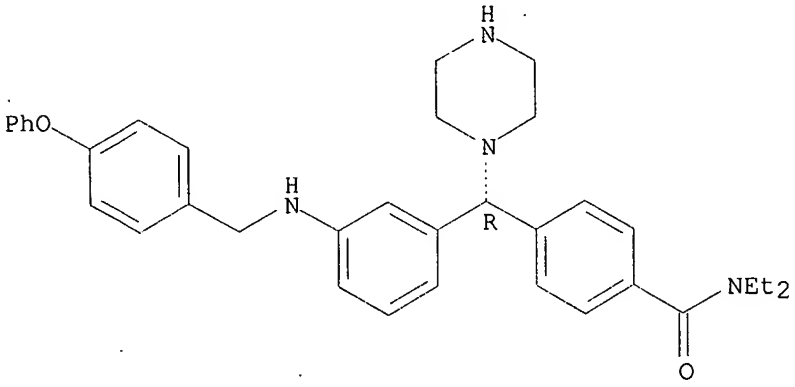


RN 691878-32-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[[(4-phenoxyphenyl)methyl]amino]phenyl]-1-piperazinylmethyl]-, trifluoroacetate (10:23) (9CI) (CA INDEX NAME)

CM 1

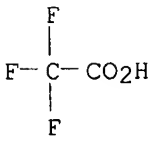
CRN 691878-31-6
CMF C35 H40 N4 O2

Absolute stereochemistry. Rotation (-).



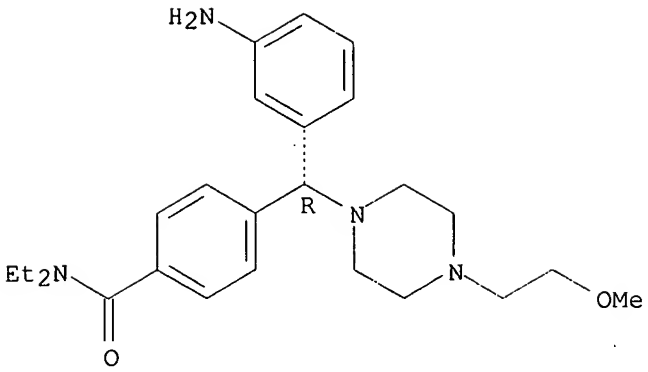
CM 2

CRN 76-05-1
CMF C2 H F3 O2



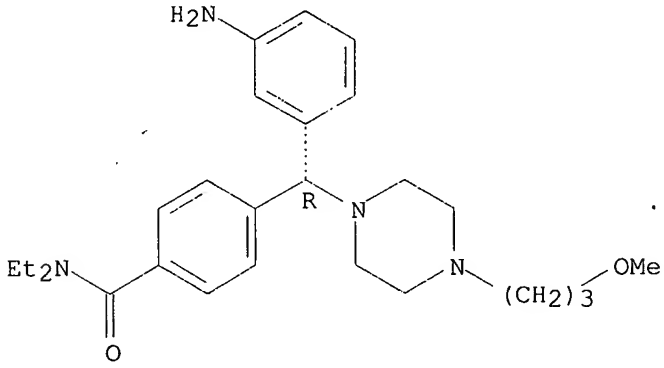
RN 691878-34-9 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(2-methoxyethyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 691878-35-0 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(3-methoxypropyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

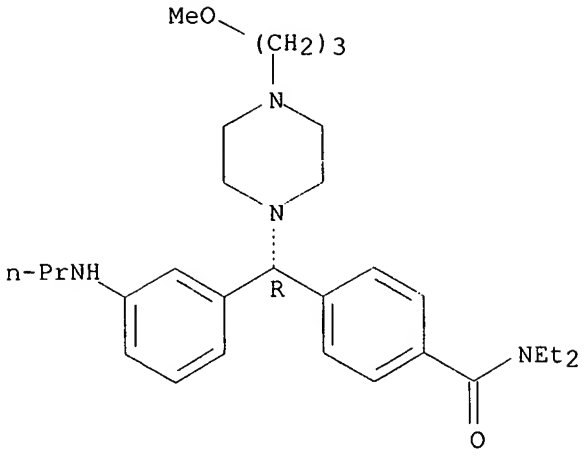


RN 691878-38-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(3-methoxypropyl)-1-piperazinyl][3-(propylamino)phenyl]methyl]-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

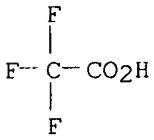
CRN 691878-37-2
CMF C29 H44 N4 O2

Absolute stereochemistry. Rotation (-).



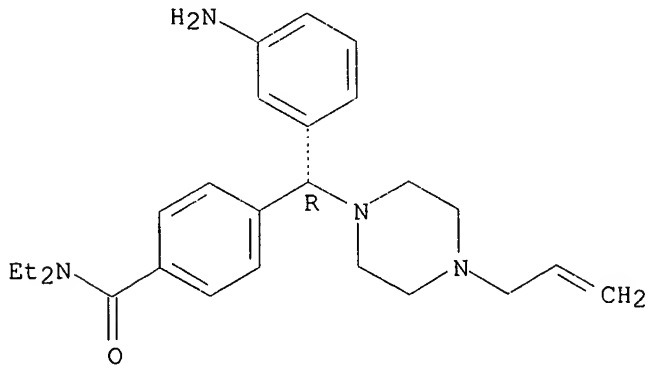
CM 2

CRN 76-05-1
CMF C2 H F3 O2



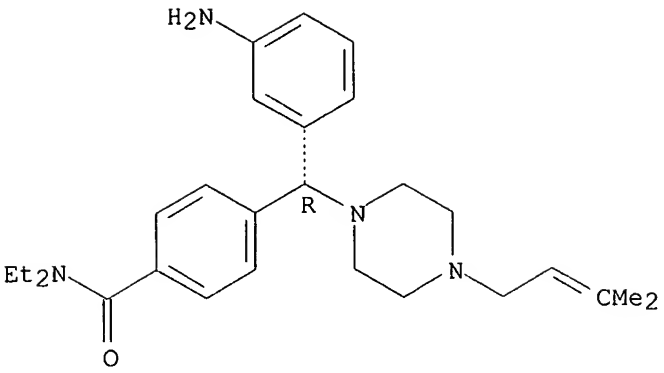
RN 691878-42-9 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



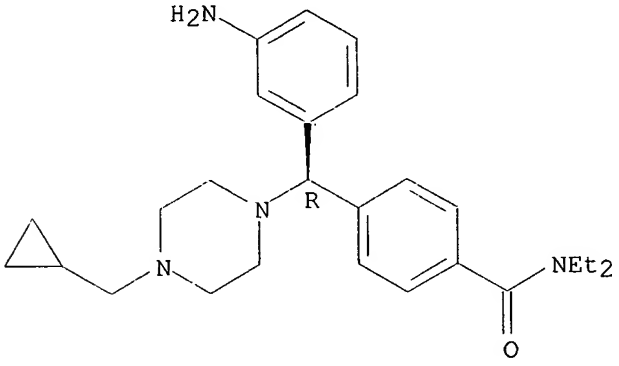
RN 691878-44-1 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(3-methyl-2-butenyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 691878-45-2 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(cyclopropylmethyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

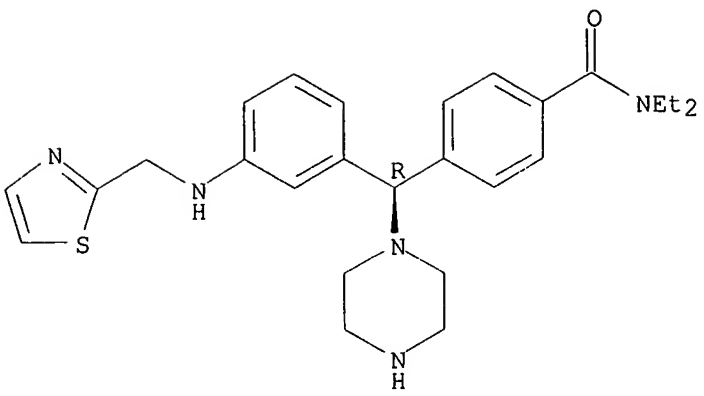


RN 691878-61-2 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-[(2-thiazolylmethyl)amino]phenyl]methyl]-, trifluoroacetate (5:12) (9CI) (CA INDEX NAME)

CM 1

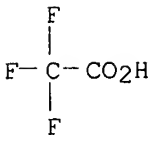
CRN 691877-69-7
CMF C26 H33 N5 O S

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

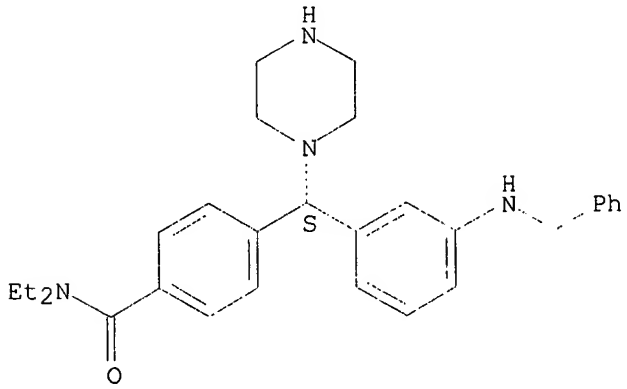


RN 691878-62-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(phenylmethyl)amino]phenyl]-1-piperazinylmethyl]-, trifluoroacetate (5:13) (9CI) (CA INDEX NAME)

CM 1

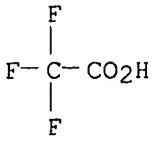
CRN 691877-70-0
CMF C29 H36 N4 O

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

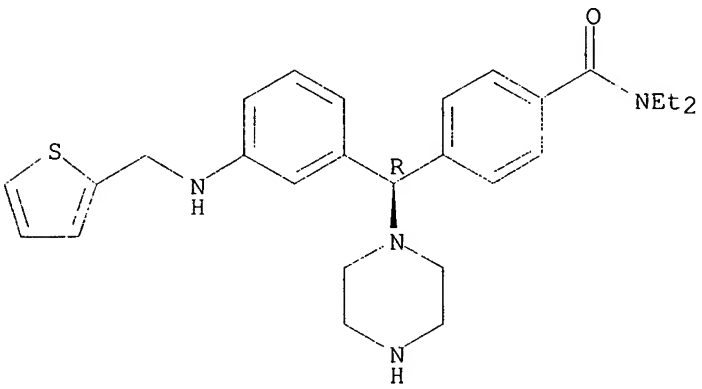


RN 691878-63-4 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-[(2-thienylmethyl)amino]phenyl]methyl]-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

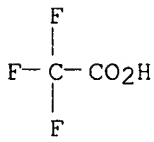
CRN 691877-71-1
CMF C27 H34 N4 O S

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

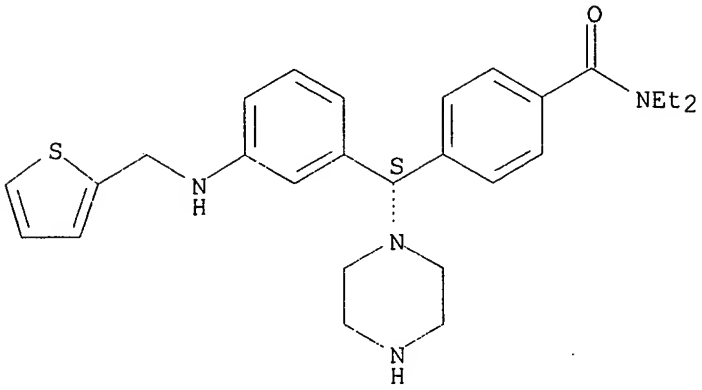


RN 691878-64-5 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[(2-thienylmethyl)amino]phenyl]methyl]-, tris(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

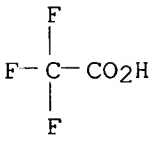
CRN 691877-72-2
CMF C27 H34 N4 O S

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

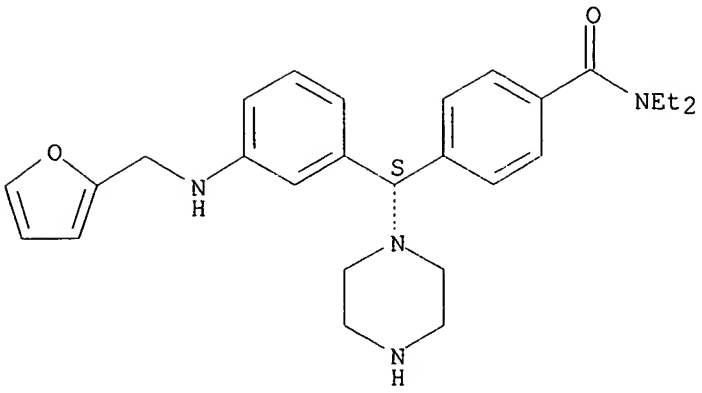


RN 691878-65-6 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(2-furanylmethyl)amino]phenyl]-1-piperazinylmethyl]-, trifluoroacetate (2:5) (9CI) (CA INDEX NAME)

CM 1

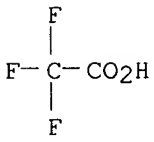
CRN 691877-73-3
CMF C27 H34 N4 O2

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

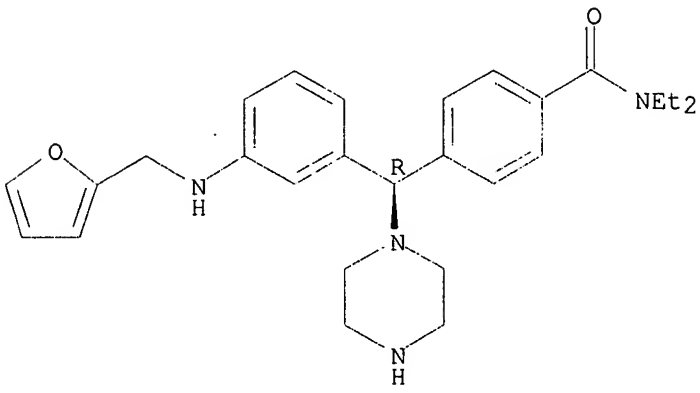


RN 691878-66-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(2-furanylmethyl)amino]phenyl]-1-piperazinylmethyl]-, tris(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

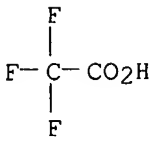
CRN 691877-75-5
CMF C27 H34 N4 O2

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

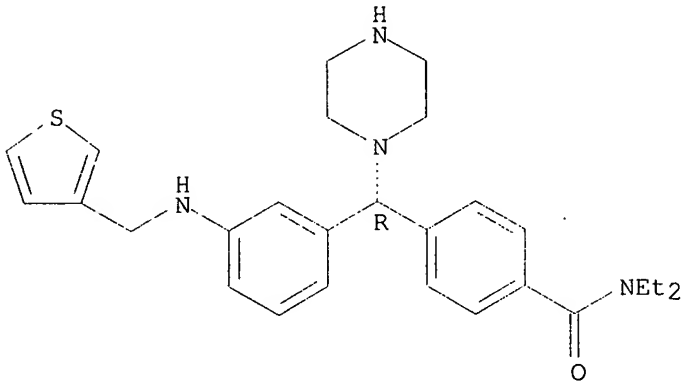


RN 691878-67-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-[(3-thienylmethyl)amino]phenyl]methyl]-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

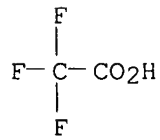
CRN 691877-76-6
CMF C27 H34 N4 O S

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

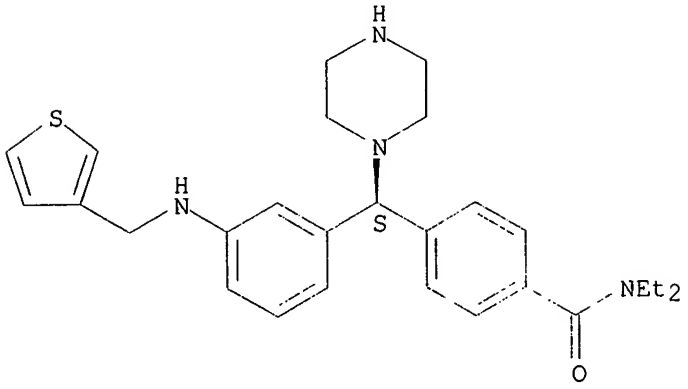


RN 691878-68-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[(3-thienylmethyl)amino]phenyl]methyl]-, trifluoroacetate (5:14) (9CI) (CA INDEX NAME)

CM 1

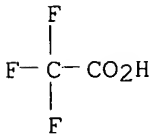
CRN 691877-77-7
CMF C27 H34 N4 O S

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

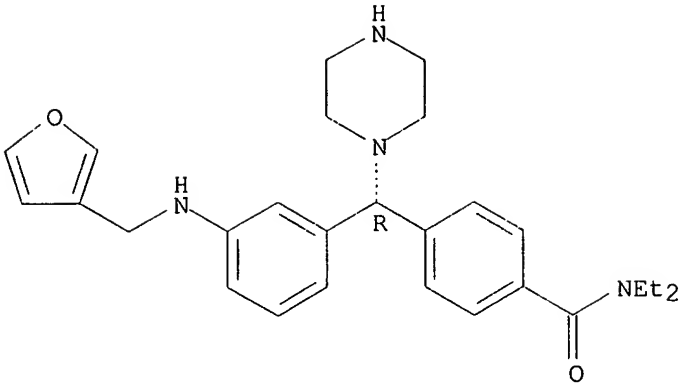


RN 691878-69-0 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(3-furanylmethyl)amino]phenyl]-1-piperazinylmethyl]-, trifluoroacetate (5:9) (9CI) (CA INDEX NAME)

CM 1

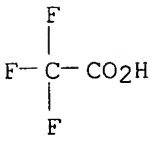
CRN 691877-78-8
CMF C27 H34 N4 O2

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

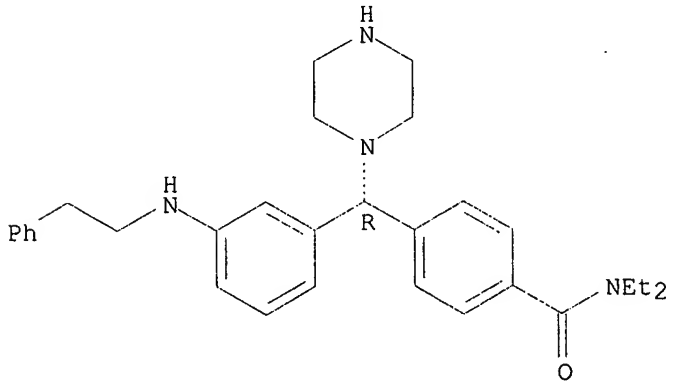


RN 691878-70-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(2-phenylethyl)amino]phenyl]-1-piperazinylmethyl]-, trifluoroacetate (10:19) (9CI) (CA INDEX NAME)

CM 1

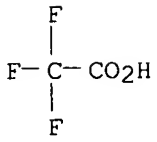
CRN 691877-79-9
CMF C30 H38 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

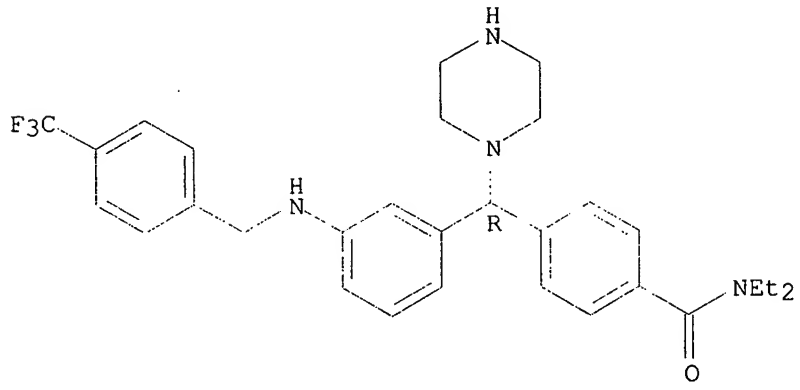


RN 691878-71-4 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-[[[4-(trifluoromethyl)phenyl]methyl]amino]phenyl]methyl]-, trifluoroacetate (5:7) (9CI) (CA INDEX NAME)

CM 1

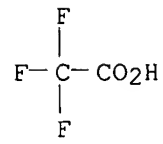
CRN 691877-81-3
CMF C30 H35 F3 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

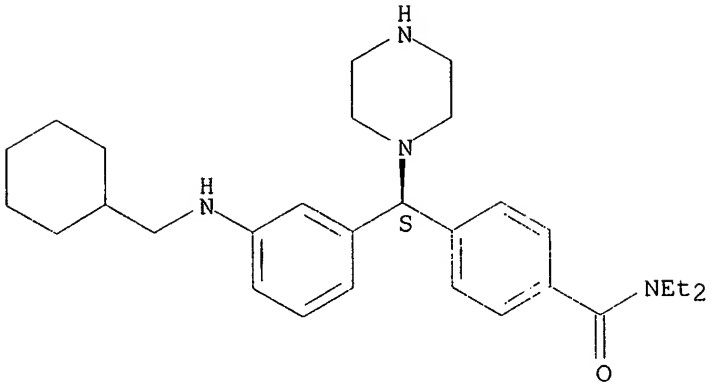


RN 691878-72-5 HCAPLUS
CN Benzamide, 4-[(S)-[3-[(cyclohexylmethyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (5:14) (9CI) (CA INDEX NAME)

CM 1

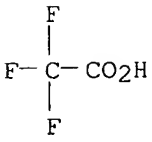
CRN 691877-83-5
CMF C29 H42 N4 O

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

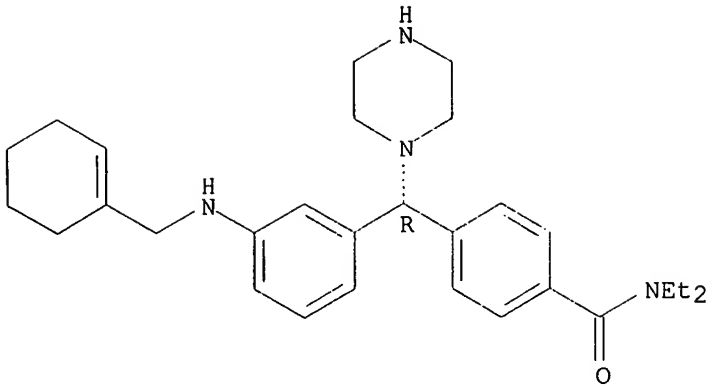


RN 691878-73-6 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(1-cyclohexen-1-ylmethyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (10:29) (9CI) (CA INDEX NAME)

CM 1

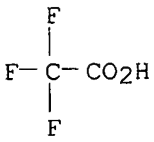
CRN 691877-85-7
CMF C29 H40 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

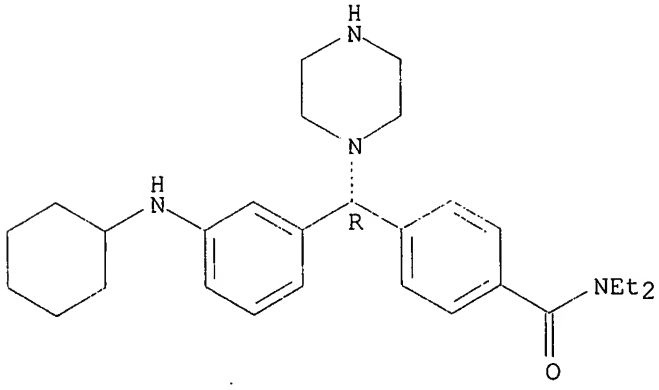


RN 691878-75-8 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclohexylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (10:23) (9CI) (CA INDEX NAME)

CM 1

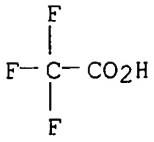
CRN 691878-74-7
CMF C28 H40 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

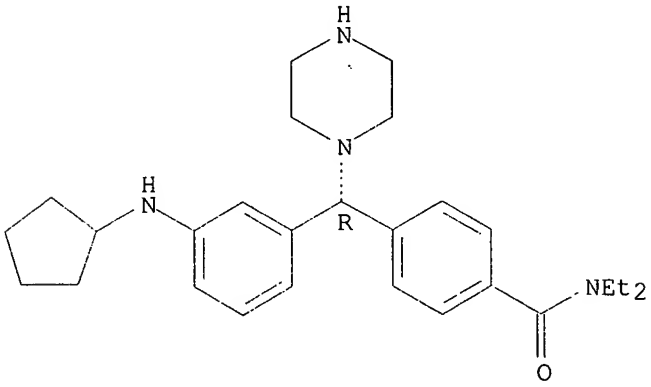


RN 691878-76-9 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclopentylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (5:13) (9CI) (CA INDEX NAME)

CM 1

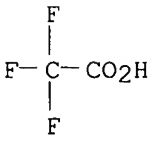
CRN 691877-89-1
CMF C27 H38 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2



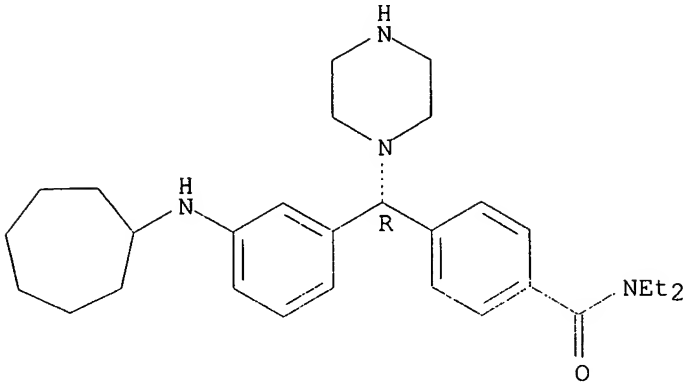
RN 691878-77-0 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cycloheptylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (2:5) (9CI) (CA INDEX NAME)

CM 1

CRN 691877-90-4

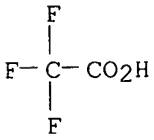
CMF C29 H42 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

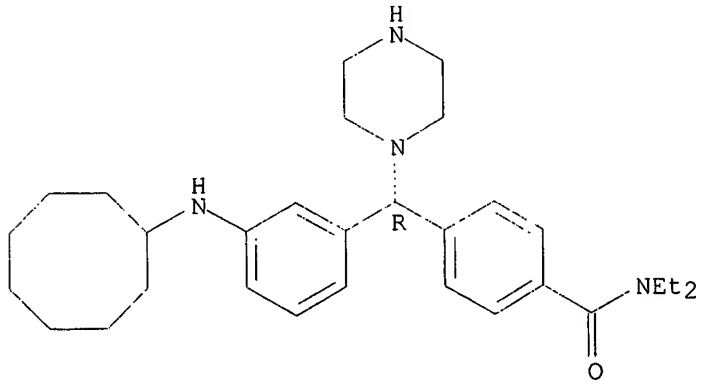


RN 691878-78-1 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclooctylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (5:13) (9CI) (CA INDEX NAME)

CM 1

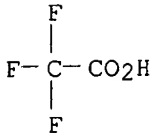
CRN 691877-91-5
CMF C30 H44 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

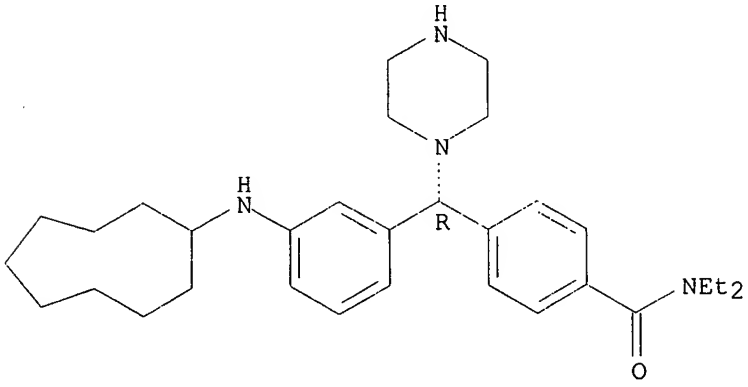


RN 691878-79-2 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclononylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (5:13) (9CI) (CA INDEX NAME)

CM 1

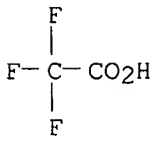
CRN 691877-92-6
CMF C31 H46 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

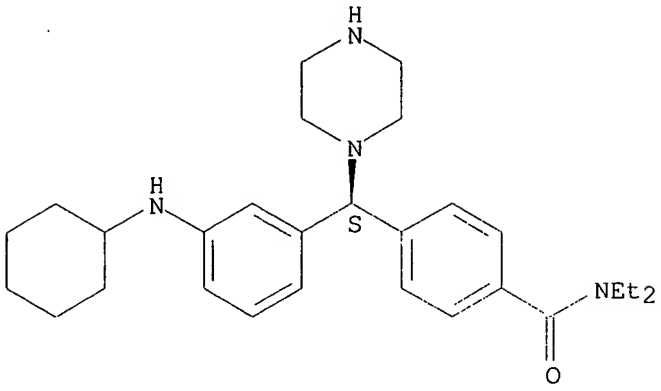


RN 691878-80-5 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (2:5) (9CI) (CA INDEX NAME)

CM 1

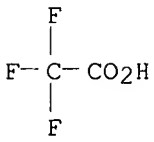
CRN 691877-93-7
CMF C28 H40 N4 O

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

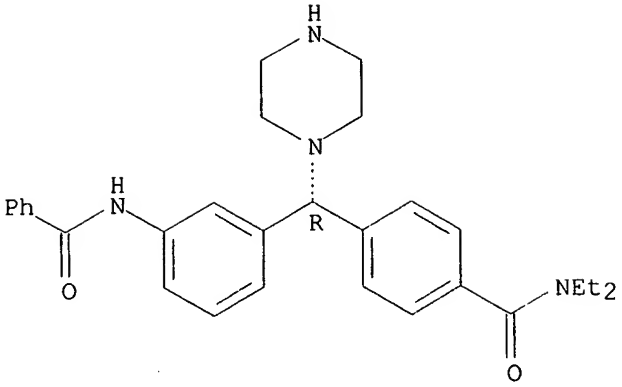


RN 691878-81-6 HCAPLUS
CN Benzamide, 4-[(R)-[3-(benzoylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (5:8) (9CI) (CA INDEX NAME)

CM 1

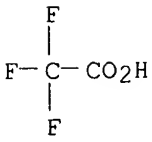
CRN 691877-99-3
CMF C29 H34 N4 O2

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

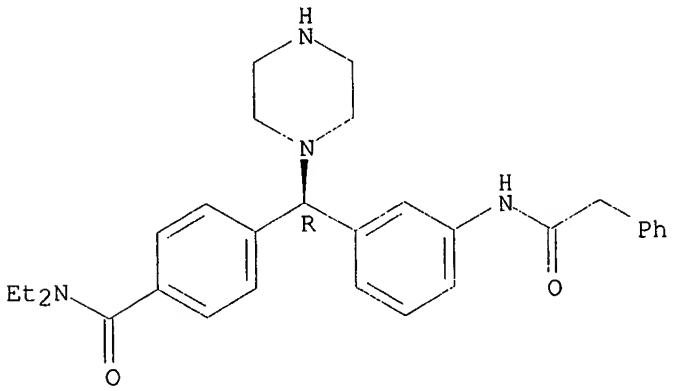


RN 691878-82-7 HCAPLUS
CN Benzeneacetamide, N-[3-[(R)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]-, trifluoroacetate (10:9) (9CI) (CA INDEX NAME)

CM 1

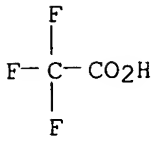
CRN 691878-00-9
CMF C30 H36 N4 O2

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

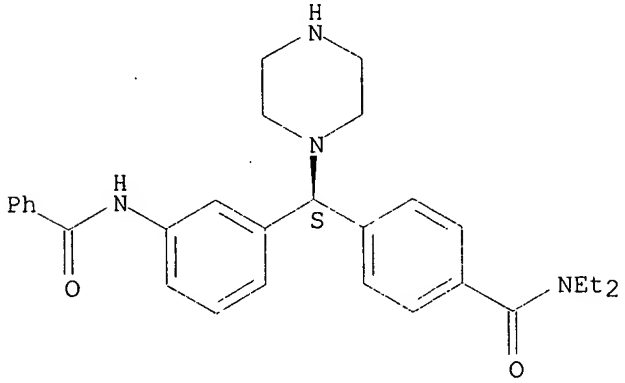


RN 691878-83-8 HCAPLUS
CN Benzamide, 4-[(S)-[3-(benzoylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (10:19) (9CI) (CA INDEX NAME)

CM 1

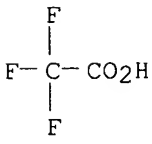
CRN 691878-01-0
CMF C29 H34 N4 O2

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2



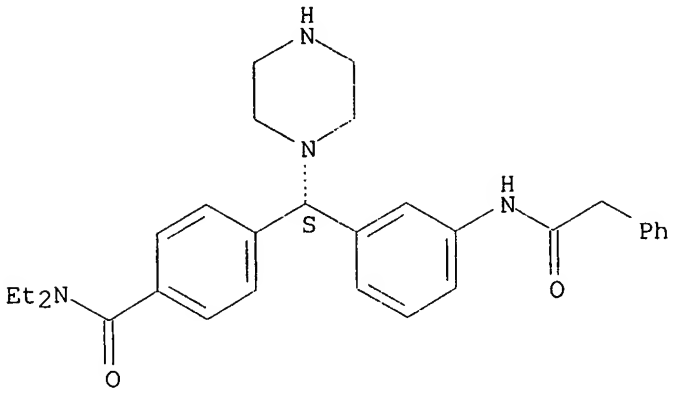
RN 691878-84-9 HCAPLUS
CN Benzeneacetamide, N-[3-[(S)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]-, trifluoroacetate (5:9) (9CI) (CA INDEX NAME)

CM 1

CRN 691878-02-1

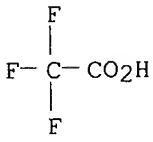
CMF C30 H36 N4 O2

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

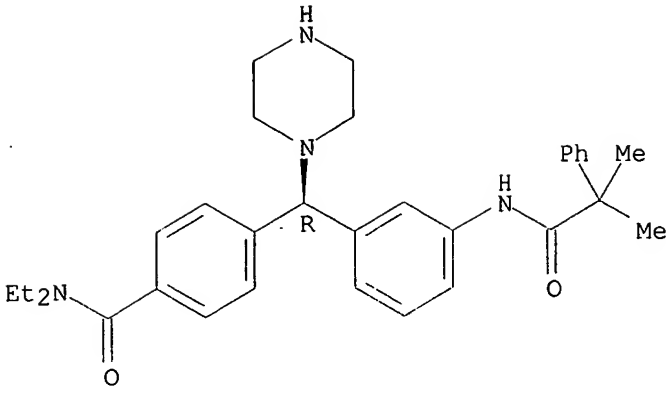


RN 691878-85-0 HCAPLUS
CN Benzeneacetamide, N-[3-[(R)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]-α,α-dimethyl-, trifluoroacetate (2:3) (9CI) (CA INDEX NAME)

CM 1

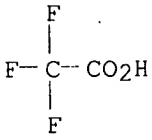
CRN 691878-03-2
CMF C32 H40 N4 O2

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

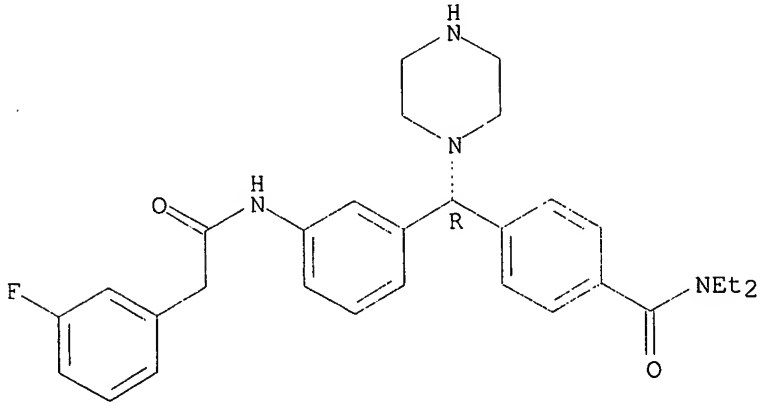


RN 691878-86-1 HCAPLUS
CN Benzeneacetamide, N-[3-[(R)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]-3-fluoro-, trifluoroacetate (5:7) (9CI) (CA INDEX NAME)

CM 1

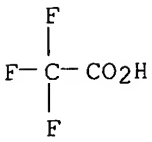
CRN 691878-04-3
CMF C30 H35 F N4 O2

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

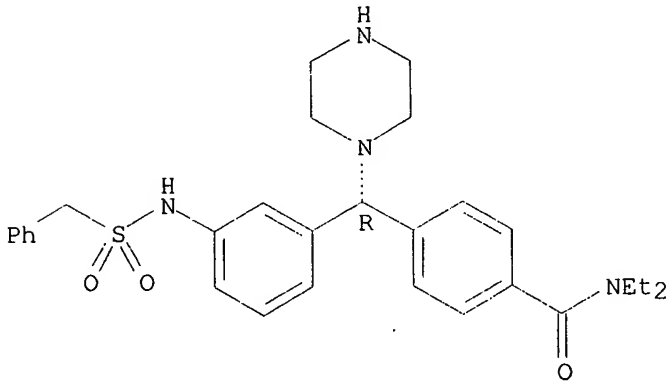


RN 691878-87-2 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[[(phenylmethyl)sulfonyl]amino]phenyl]-1-piperazinylmethyl]-, trifluoroacetate (5:3) (9CI) (CA INDEX NAME)

CM 1

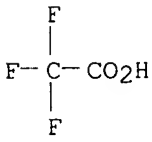
CRN 691878-11-2
CMF C29 H36 N4 O3 S

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

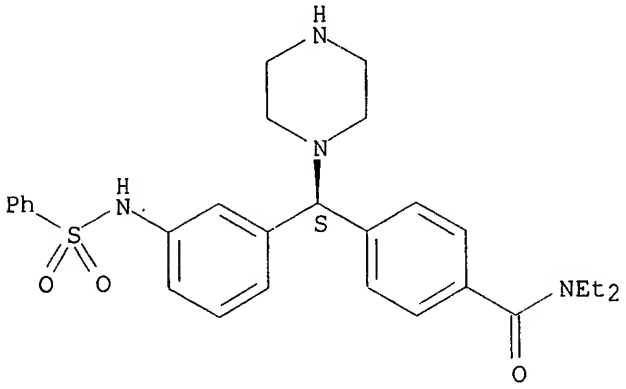


RN 691878-89-4 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(phenylsulfonyl)amino]phenyl]-1-piperazinylmethyl]-, trifluoroacetate (10:19) (9CI) (CA INDEX NAME)

CM 1

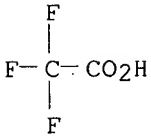
CRN 691878-88-3
CMF C28 H34 N4 O3 S

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

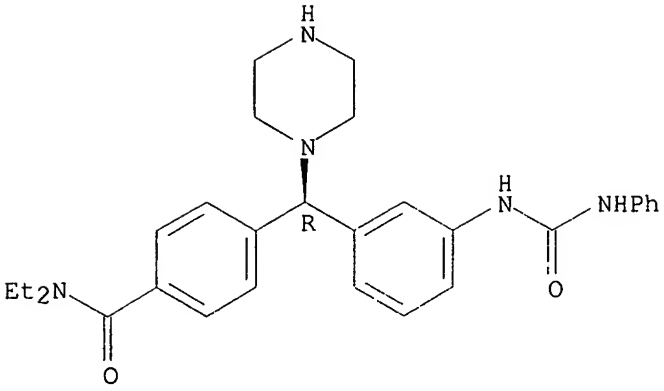


RN 691878-90-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[[(phenylamino)carbonyl]amino]phenyl]-1-piperazinylmethyl]-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

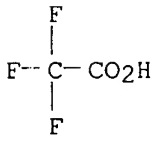
CRN 691878-12-3
CMF C29 H35 N5 O2

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

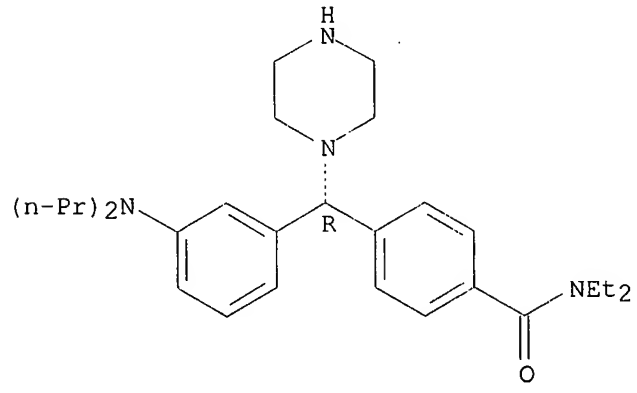


RN 691878-91-8 HCAPLUS
CN Benzamide, 4-[(R)-[3-(dipropylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (5:21) (9CI) (CA INDEX NAME)

CM 1

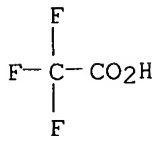
CRN 691878-19-0
CMF C28 H42 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

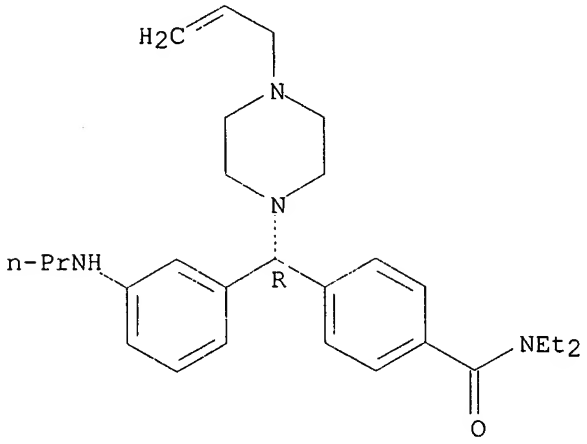


RN 691878-92-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(2-propenyl)-1-piperazinyl][3-(propylamino)phenyl]methyl]-, trifluoroacetate (10:27) (9CI) (CA INDEX NAME)

CM 1

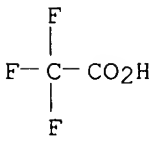
CRN 691878-33-8
CMF C28 H40 N4 O

Absolute stereochemistry. Rotation (-).



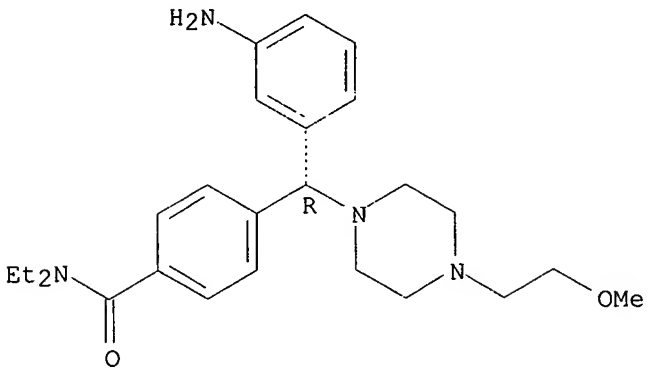
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 691878-93-0 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(2-methoxyethyl)-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (5:16) (9CI) (CA INDEX NAME)

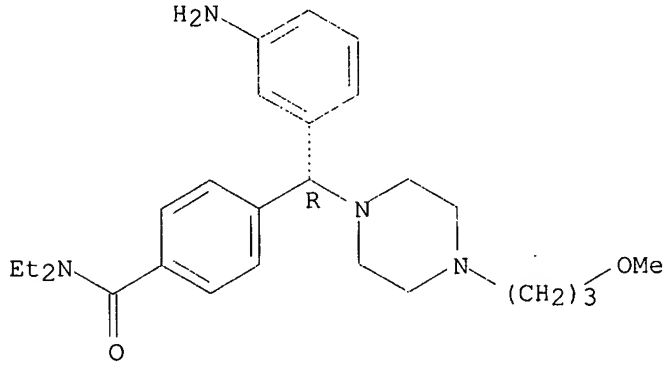
Absolute stereochemistry. Rotation (-).



●16/5 HCl

RN 691878-94-1 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(3-methoxypropyl)-1-piperazinyl]methyl]-N,N-diethyl-, tetrahydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



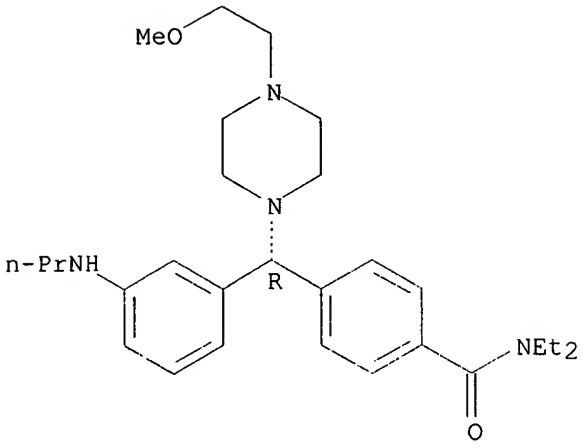
●4 HCl

RN 691878-95-2 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(2-methoxyethyl)-1-piperazinyl][3-(propylamino)phenyl]methyl]-, trifluoroacetate (5:13) (9CI) (CA INDEX NAME)

CM 1

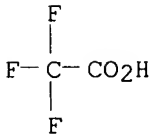
CRN 691878-36-1
CMF C28 H42 N4 O2

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

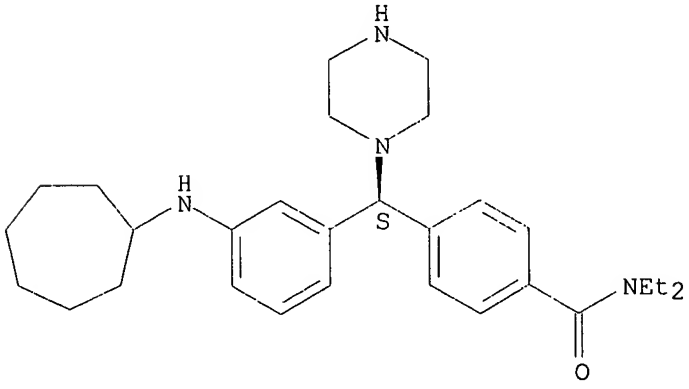


RN 691878-96-3 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cycloheptylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (10:29) (9CI) (CA INDEX NAME)

CM 1

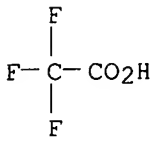
CRN 691878-39-4
CMF C29 H42 N4 O

Absolute stereochemistry. Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

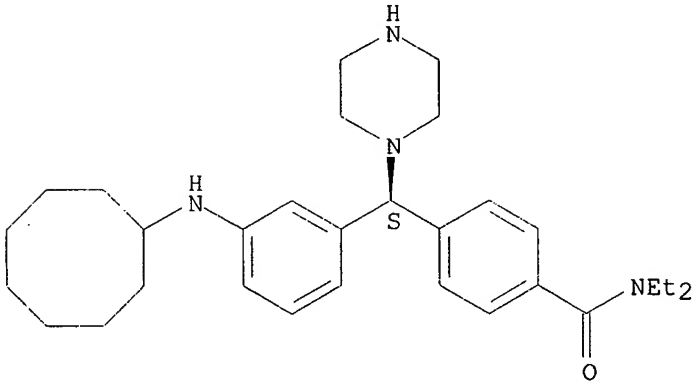


RN 691878-97-4 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclooctylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, trifluoroacetate (5:14) (9CI) (CA INDEX NAME)

CM 1

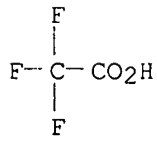
CRN 691878-40-7
CMF C30 H44 N4 O

Absolute stereochemistry. Rotation (+).



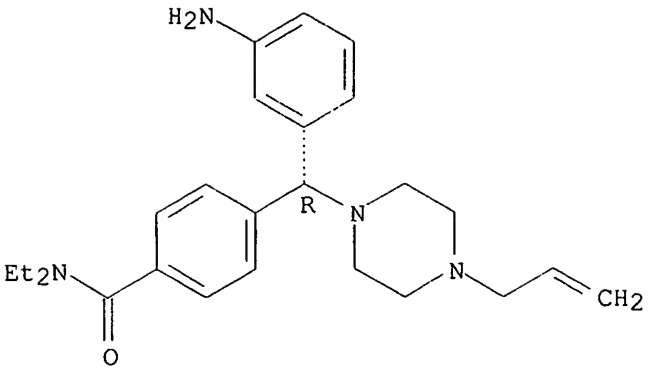
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 691878-98-5 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, trihydrochloride (9CI) (CA INDEX NAME)

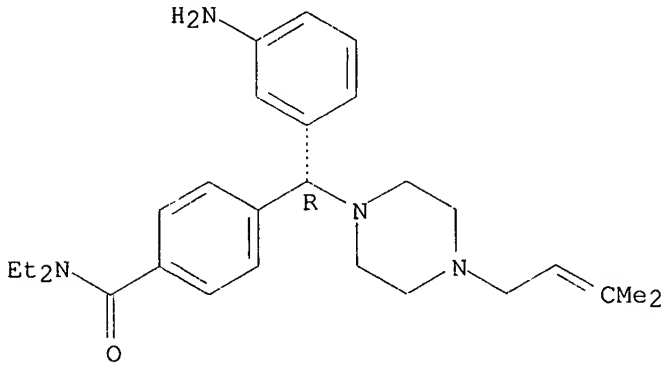
Absolute stereochemistry. Rotation (+).



●3 HCl

RN 691878-99-6 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(3-methyl-2-butenyl)-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (5:19) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



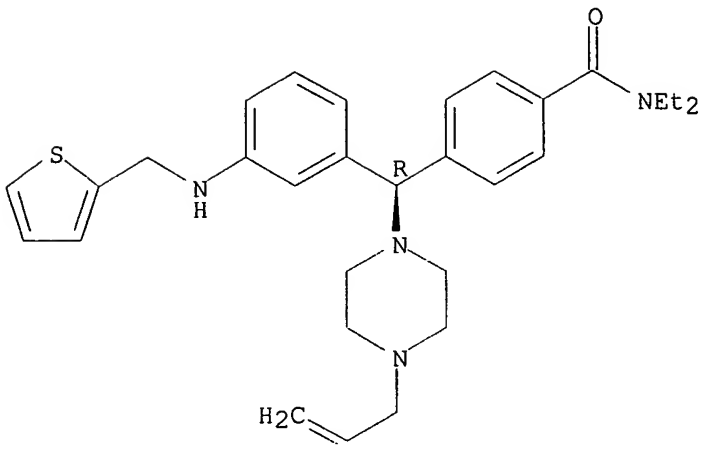
●19/5 HCl

RN 691879-00-2 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(2-propenyl)-1-piperazinyl][3-[(2-thienylmethyl)amino]phenyl]methyl]-, trifluoroacetate (10:23) (9CI) (CA INDEX NAME)

CM 1

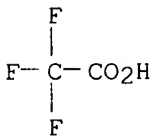
CRN 691878-46-3
CMF C30 H38 N4 O S

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

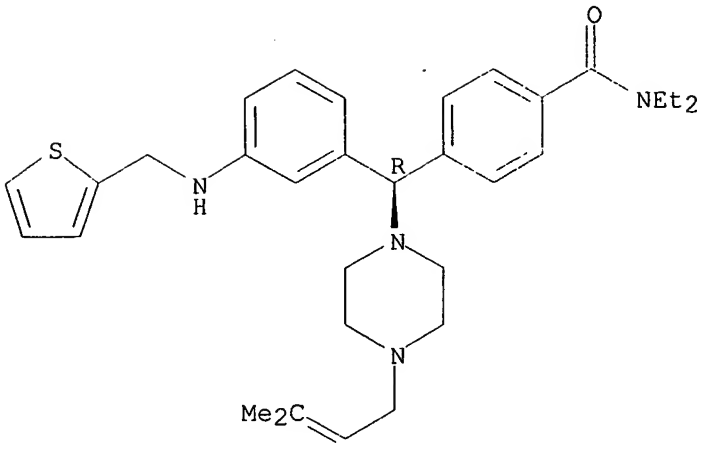


RN 691879-01-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(3-methyl-2-butenyl)-1-piperazinyl][3-[(2-thienylmethyl)amino]phenyl]methyl]-, trifluoroacetate (5:7) (9CI) (CA INDEX NAME)

CM 1

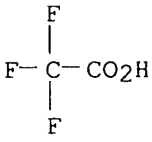
CRN 691878-47-4
CMF C32 H42 N4 O S

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

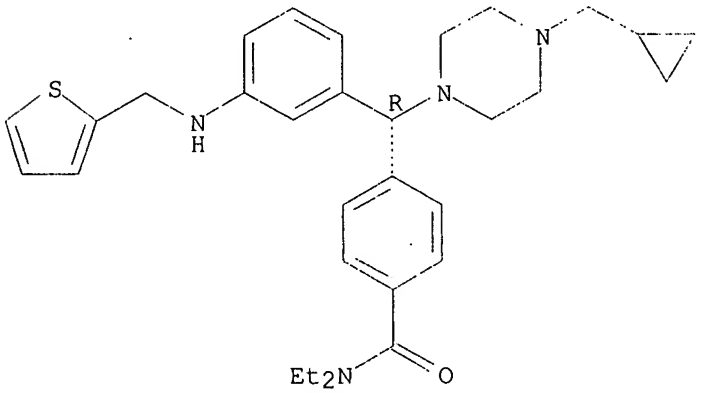


RN 691879-02-4 HCAPLUS
CN Benzamide, 4-[(R)-[4-(cyclopropylmethyl)-1-piperazinyl][3-[(2-thienylmethyl)amino]phenyl]methyl]-N,N-diethyl-, trifluoroacetate (5:12) (9CI) (CA INDEX NAME)

CM 1

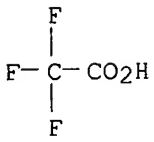
CRN 691878-48-5
CMF C31 H40 N4 O S

Absolute stereochemistry. Rotation (-).



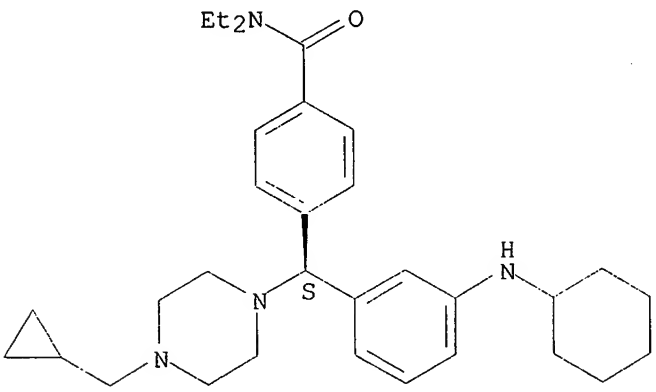
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 691879-03-5 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl][4-(cyclopropylmethyl)-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (5:16) (9CI) (CA INDEX NAME)

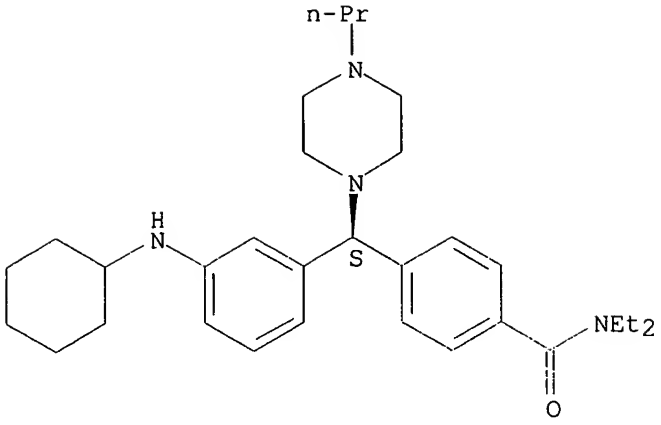
Absolute stereochemistry. Rotation (+).



●16/5 HCl

RN 691879-04-6 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl](4-propyl-1-piperazinyl)methyl]-N,N-diethyl-, hydrochloride (10:43) (9CI) (CA INDEX NAME)

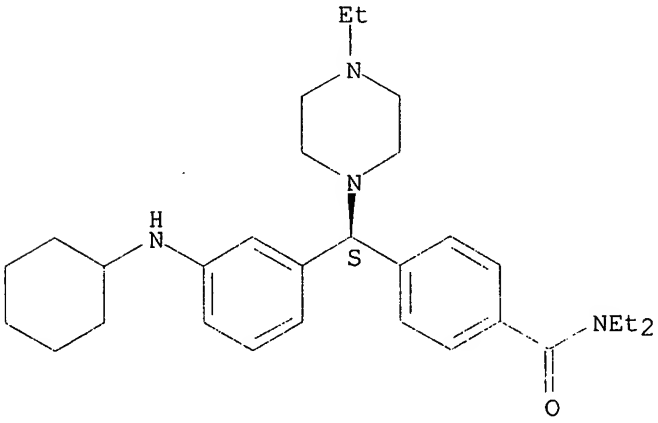
Absolute stereochemistry. Rotation (+).



●43/10 HCl

RN 691879-05-7 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl](4-ethyl-1-piperazinyl)methyl]-N,N-diethyl-, pentahydrochloride (9CI) (CA INDEX NAME)

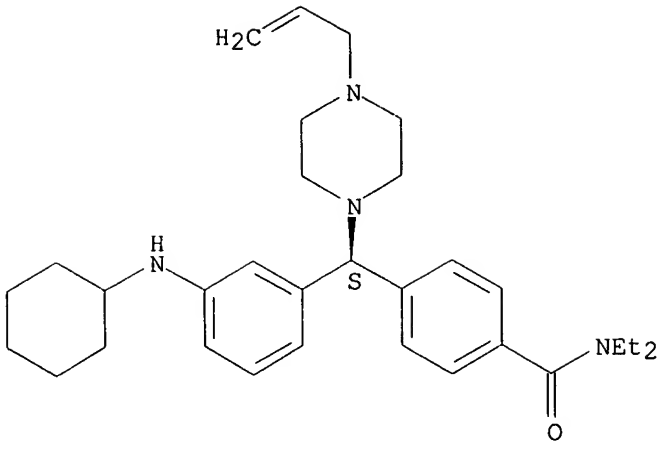
Absolute stereochemistry. Rotation (+).



●5 HCl

RN 691879-06-8 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl][4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (5:22) (9CI) (CA INDEX NAME)

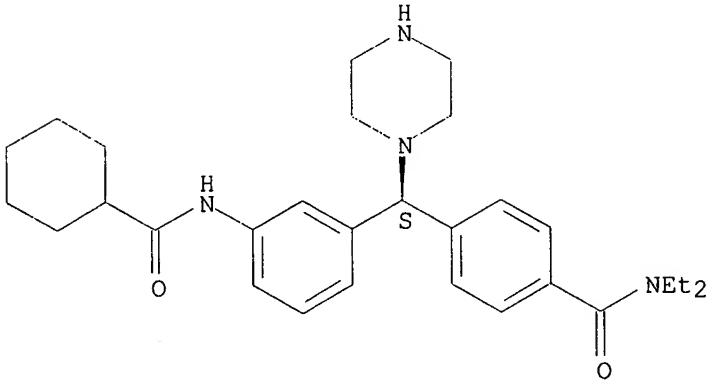
Absolute stereochemistry. Rotation (+).



●22/5 HCl

RN 691879-07-9 HCAPLUS
CN Benzamide, 4-[(S)-[3-[(cyclohexylcarbonyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl-, tetrahydrochloride (9CI) (CA INDEX NAME)

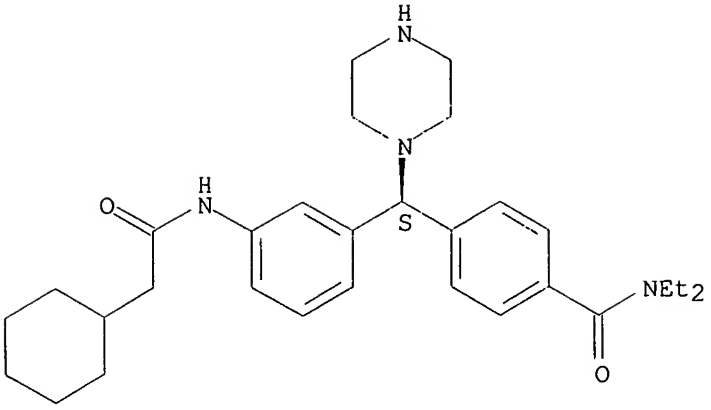
Absolute stereochemistry. Rotation (+).



●4 HCl

RN 691879-08-0 HCAPLUS
CN Benzamide, 4-[(S)-[3-[(cyclohexylacetyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl-, hydrochloride (5:2) (9CI) (CA INDEX NAME)

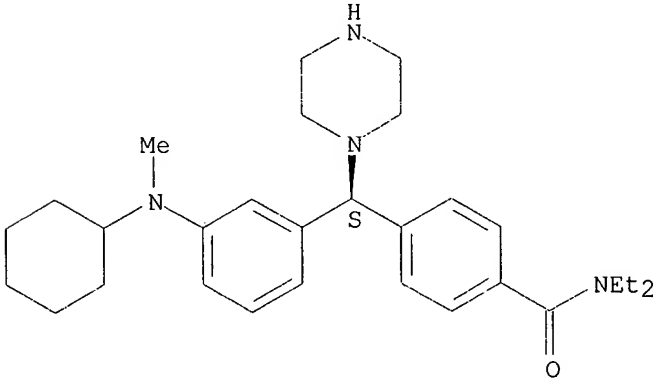
Absolute stereochemistry. Rotation (+).



●2/5 HCl

RN 691879-09-1 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclohexylmethylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, hydrochloride (10:41) (9CI) (CA INDEX NAME)

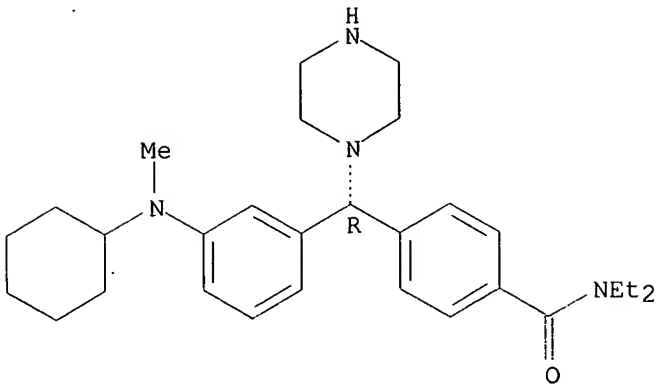
Absolute stereochemistry. Rotation (+).



●41/10 HCl

RN 691879-10-4 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclohexylmethylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl-, hydrochloride (5:24) (9CI) (CA INDEX NAME)

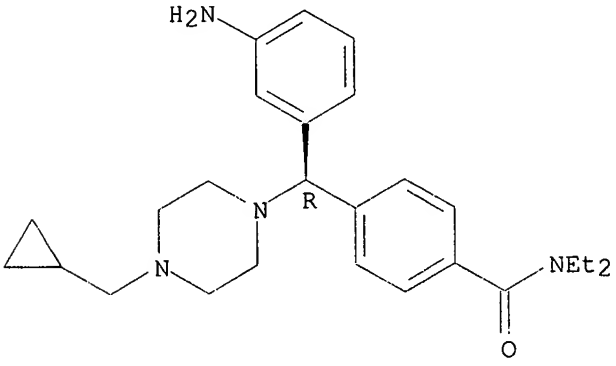
Absolute stereochemistry. Rotation (-).



●24/5 HCl

RN 691879-17-1 HCAPLUS
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-(cyclopropylmethyl)-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (5:19) (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



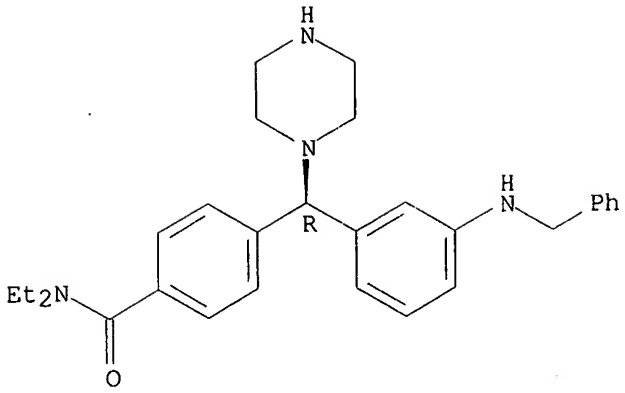
●19/5 HCl

RN 693259-21-1 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(phenylmethyl)amino]phenyl]-1-piperazinylmethyl]-, trifluoroacetate (5:9) (9CI) (CA INDEX NAME)

CM 1

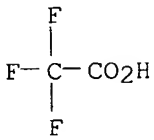
CRN 691877-74-4
CMF C29 H36 N4 O

Absolute stereochemistry. Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2



IT **691877-68-6P**, (S)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(1,3-thiazol-2-ylmethyl)amino]phenyl]methyl]benzamide **691877-69-7P**, (R)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(1,3-thiazol-2-ylmethyl)amino]phenyl]methyl]benzamide **691877-70-0P**, (S)-4-[[3-(Benzylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691877-71-1P**, (R)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(thien-2-ylmethyl)amino]phenyl]methyl]benzamide **691877-72-2P**, (S)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(thien-2-ylmethyl)amino]phenyl]methyl]benzamide **691877-73-3P**, (S)-N,N-Diethyl-4-[[3-[(2-furylmethyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691877-74-4P**, (R)-4-[[3-(Benzylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691877-75-5P**, (R)-N,N-Diethyl-4-[[3-[(2-furylmethyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691877-76-6P**, (R)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(thien-3-ylmethyl)amino]phenyl]methyl]benzamide **691877-77-7P**, (S)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(thien-3-ylmethyl)amino]phenyl]methyl]benzamide **691877-78-8P**, (R)-N,N-Diethyl-4-[[3-[(3-furylmethyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691877-79-9P** **691877-80-2P**, (R)-4-[[3-[(Cyclohexylmethyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691877-81-3P**, (R)-N,N-Diethyl-4-[(piperazin-1-yl)[3-[(4-trifluoromethylbenzyl)amino]phenyl]methyl]benzamide **691877-82-4P**, (R)-4-[[3-[(Cyclopentylmethyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide hydrochloride (1:0.6) **691877-83-5P**, (S)-4-[[3-[(Cyclohexylmethyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691877-85-7P**, (R)-4-[[3-[(Cyclohex-1-en-1-ylmethyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691877-86-8P**, (S)-N,N-Diethyl-4-[[3-

[methyl(phenyl)amino]phenyl](piperazin-1-yl)methyl]benzamide hydrochloride **691877-87-9P**, (S)-N,N-Diethyl-4-[[3-[ethyl(phenyl)amino]phenyl](piperazin-1-yl)methyl]benzamide hydrochloride **691877-88-0P**, (R)-N,N-Diethyl-4-[[3-[ethyl(phenyl)amino]phenyl](piperazin-1-yl)methyl]benzamide hydrochloride **691877-89-1P**, (R)-4-[[3-(Cyclopentylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691877-90-4P**, (R)-4-[[3-(Cycloheptylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691877-91-5P**, (R)-4-[[3-(Cyclooctylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691877-92-6P**, (R)-4-[[3-(Cyclononylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691877-94-8P**, (R)-N,N-Diethyl-4-[[3-[(4-methylphenyl)amino]phenyl](piperazin-1-yl)methyl]benzamide hydrochloride (1:2.9) **691877-95-9P**, (S)-N,N-Diethyl-4-[[3-[(4-methylphenyl)amino]phenyl](piperazin-1-yl)methyl]benzamide trihydrochloride **691877-96-0P**, (R)-4-[[3-[(3-Chlorophenyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide hydrochloride (1:2.9) **691877-97-1P**, (S)-4-[[3-[(3-Chlorophenyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide hydrochloride **691877-98-2P**, (R)-4-[[3-[(2-Fluorophenyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide hydrochloride (1:2.9) **691877-99-3P**, (R)-4-[[3-(Benzoylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-00-9P**, (R)-N,N-Diethyl-4-[[3-[(phenylacetyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691878-01-0P**, (S)-4-[[3-(Benzoylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-02-1P**, (S)-N,N-Diethyl-4-[[3-[(phenylacetyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691878-03-2P**, (R)-N,N-Diethyl-4-[[3-[(2-methyl-2-phenylpropanoyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691878-04-3P**, (R)-N,N-Diethyl-4-[[3-[[(3-fluorophenyl)acetyl]amino]phenyl](piperazin-1-yl)methyl]benzamide **691878-05-4P**, (R)-4-[[3-[(Cyclohexylacetyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-07-6P**, (R)-N,N-Diethyl-4-[[3-[(3-phenylpropanoyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691878-08-7P**, (R)-4-[[3-[(Cyclohexylcarbonyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-11-2P**, (R)-4-[[3-[(Benzylsulfonyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-12-3P**, (R)-4-[[3-[(Anilinocarbonyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-13-4P**, (R)-4-[[3-[(Anilinocarbonothioyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-14-5P**, (S)-N,N-Diethyl-4-[(1-**piperazinyl**)[3-(propylamino)phenyl]methyl]benzamide **691878-15-6P**, (S)-4-[[3-(Dipropylamino)phenyl]piperazin-1-ylmethyl]-N,N-diethylbenzamide **691878-19-0P**, (R)-4-[[3-(Dipropylamino)phenyl]piperazin-1-ylmethyl]-N,N-diethylbenzamide **691878-21-4P**, (S)-N,N-Diethyl-4-[(1-**piperazinyl**)[3-[[[4-(3-pyridinyl)phenyl]methyl]amino]phenyl]methyl]benzamide **691878-23-6P**, (S)-N,N-Diethyl-4-[[3-[[[4-(1H-imidazol-1-yl)phenyl]methyl]amino]phenyl]piperazin-1-ylmethyl]benzamide **691878-25-8P**, (S)-N,N-Diethyl-4-[(1-**piperazinyl**)[3-[(2-quinolinylmethyl)amino]phenyl]methyl]benzamide **691878-27-0P**, (R)-4-[[3-[(2,2-Diphenylethyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-29-2P**, (R)-4-[[3-[[[4-(1,1-Dimethylethyl)phenyl]methyl]amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-31-6P**, (R)-N,N-Diethyl-4-[[3-[[(4-phenoxyphenyl)methyl]amino]phenyl](piperazin-1-yl)methyl]benzamide **691878-33-8P**, (R)-N,N-Diethyl-4-[[4-(2-propenyl)-1-**piperazinyl**][3-(propylamino)phenyl]methyl]benzamide

691878-36-1P, (R)-N,N-Diethyl-4-[[4-(2-methoxyethyl)-1-**piperazinyl**][3-(propylamino)phenyl]methyl]benzamide **691878-37-2P**, (R)-N,N-Diethyl-4-[[4-(3-methoxypropyl)-1-**piperazinyl**][3-(propylamino)phenyl]methyl]benzamide **691878-40-7P**, (S)-4-[[3-(Cyclooctylamino)phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-41-8P**, (S)-N,N-Diethyl-4-[[3-[(3-phenylpropanoyl)amino]phenyl](piperazin-1-yl)methyl]benzamide hydrochloride (1:2.9) **691878-46-3P**, (R)-N,N-Diethyl-4-[[4-(2-propenyl)-1-**piperazinyl**][3-[[(2-thienyl)methyl]amino]phenyl]methyl]benzamide **691878-47-4P**, (R)-N,N-Diethyl-4-[[4-(3-methyl-2-butenyl)-1-**piperazinyl**][3-[[(2-thienyl)methyl]amino]phenyl]methyl]benzamide **691878-48-5P**, (R)-4-[[4-(Cyclopropylmethyl)-1-**piperazinyl**][3-[(2-thienylmethyl)amino]phenyl]methyl]-N,N-diethylbenzamide **691878-49-6P**, (S)-4-[[3-(Cyclohexylamino)phenyl][4-(cyclopropylmethyl)piperazin-1-yl]methyl]-N,N-diethylbenzamide **691878-50-9P**, (S)-4-[[3-(Cyclohexylamino)phenyl](4-propylpiperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-51-0P**, (S)-4-[[3-(Cyclohexylamino)phenyl](4-ethylpiperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-52-1P**, (S)-4-[(4-Allylpiperazin-1-yl)[3-(cyclohexylamino)phenyl]methyl]-N,N-diethylbenzamide **691878-53-2P**, (S)-4-[[3-[(Cyclohexylcarbonyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-54-3P**, (S)-4-[[3-[(Cyclohexylacetyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-55-4P**, (S)-4-[[3-[Cyclohexyl(methyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-56-5P**, (R)-4-[[3-[Cyclohexyl(methyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-57-6P**, (S)-N,N-Diethyl-4-[[3-[ethyl(phenyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691878-58-7P**, (R)-N,N-Diethyl-4-[[3-[methyl(phenyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691878-59-8P**, (R)-N,N-Diethyl-4-[[3-[ethyl(phenyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691878-60-1P**, (S)-4-[[3-[(2-Fluorophenyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-74-7P**, (R)-4-[[3-[Cyclohexylamino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide **691878-88-3P**, (S)-N,N-Diethyl-4-[[3-[(phenylsulfonyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **691879-16-0P**, (R)-N,N-Diethyl-4-[[3-[(phenylsulfonyl)amino]phenyl](piperazin-1-yl)methyl]benzamide **692726-52-6P 693259-12-0P**, (R)-N,N-Diethyl-4-[[3-[methyl(phenyl)amino]phenyl](piperazin-1-yl)methyl]benzamide hydrochloride **693259-13-1P**, (S)-4-[[3-[(2-Fluorophenyl)amino]phenyl](piperazin-1-yl)methyl]-N,N-diethylbenzamide trihydrochloride **693259-14-2P 693259-15-3P 693259-16-4P 693259-17-5P 693259-18-6P 693259-19-7P 693259-20-0P**

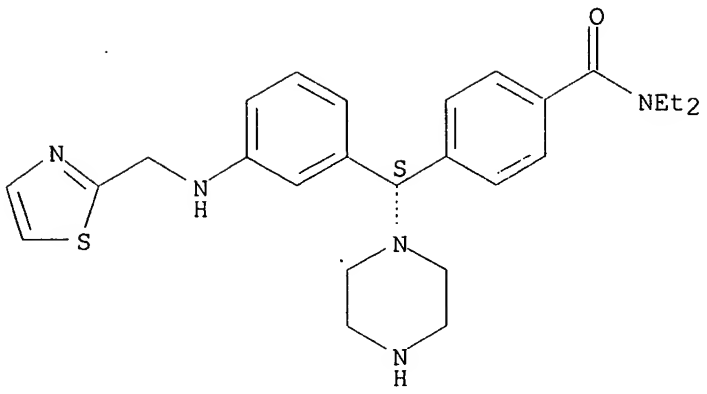
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(δ receptor agonist; preparation of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain, anxiety, or gastrointestinal disorders)

RN 691877-68-6 HCAPLUS

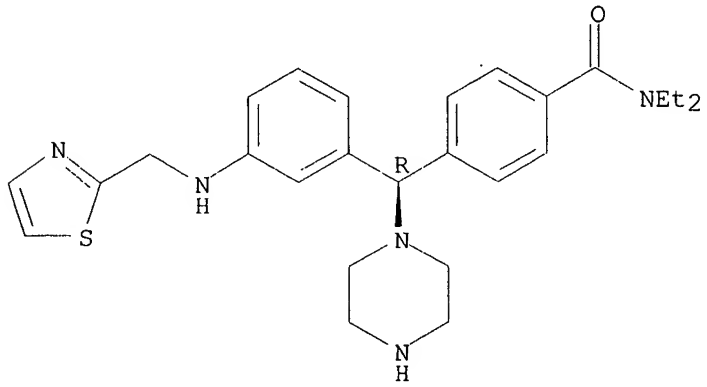
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[(2-thiazolylmethyl)amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



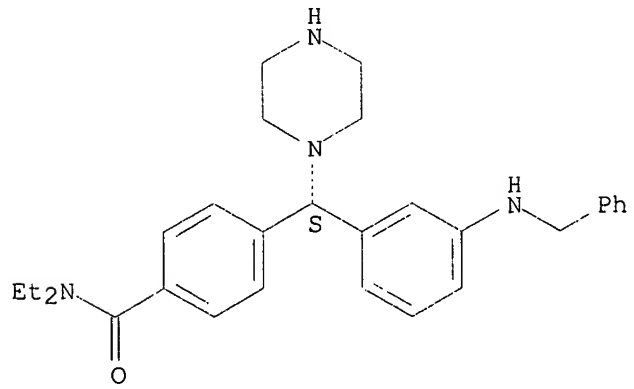
RN 691877-69-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-[(2-thiazolylmethyl)amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



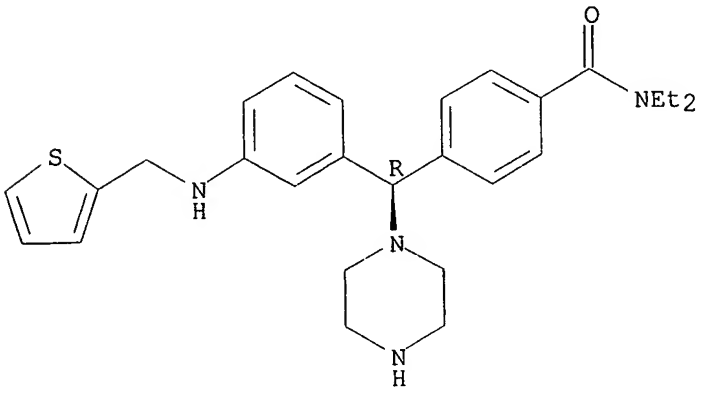
RN 691877-70-0 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(phenylmethyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



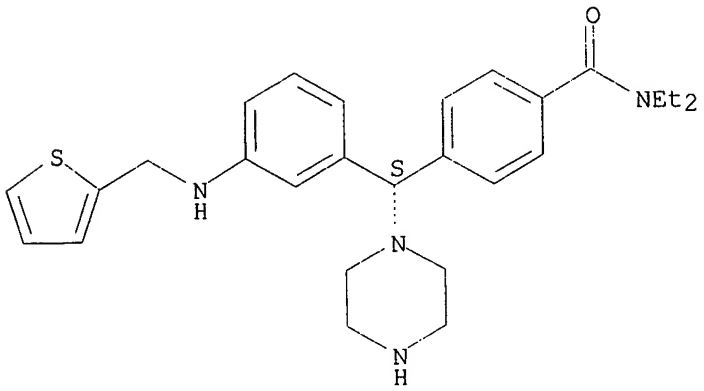
RN 691877-71-1 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-[(2-thienylmethyl)amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



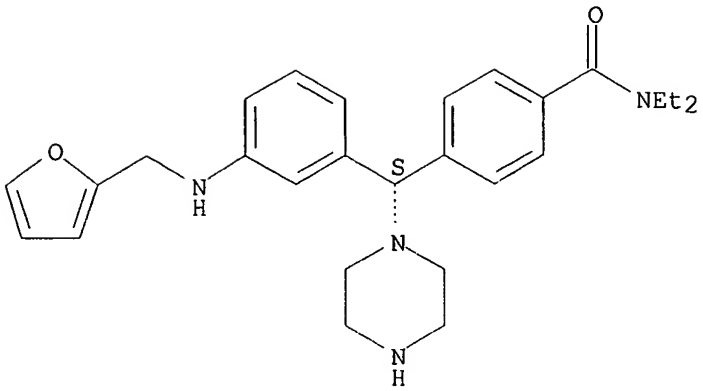
RN 691877-72-2 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[(2-thienylmethyl)amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



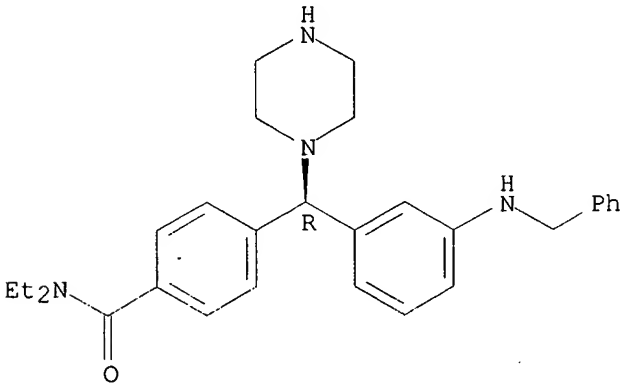
RN 691877-73-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(2-furanylmethyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



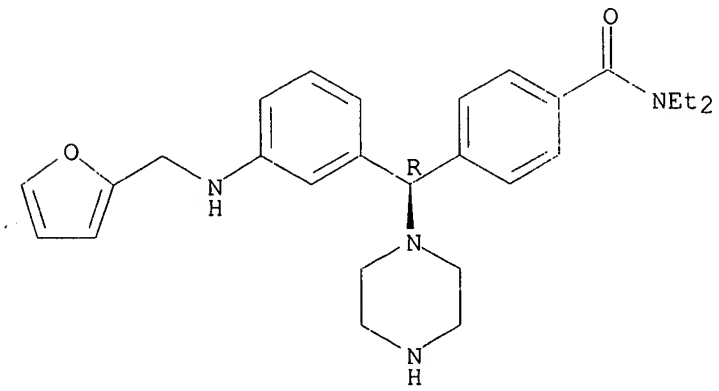
RN 691877-74-4 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(phenylmethyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



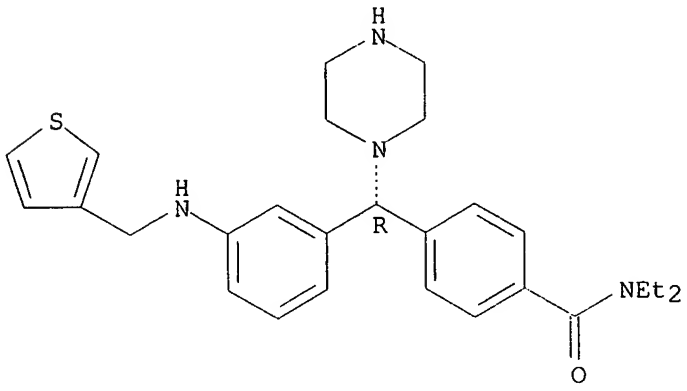
RN 691877-75-5 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(2-furanylmethyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



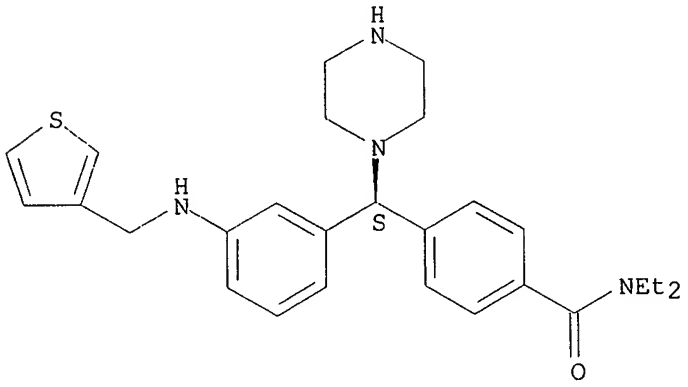
RN 691877-76-6 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-[(3-thienylmethyl)amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



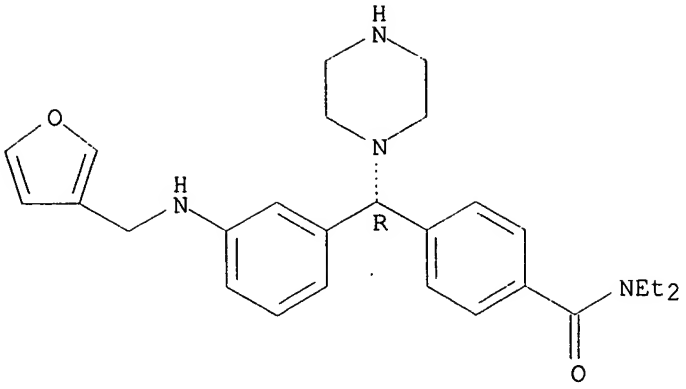
RN 691877-77-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[(3-thienylmethyl)amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



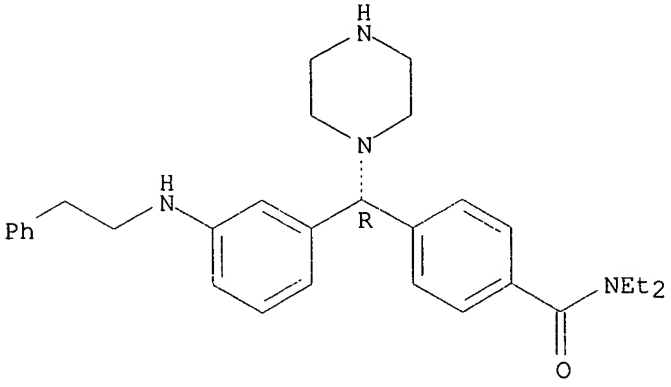
RN 691877-78-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(3-furanylmethyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



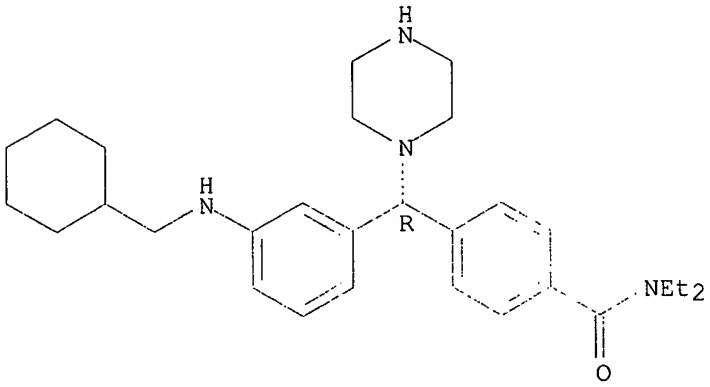
RN 691877-79-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(2-phenylethyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



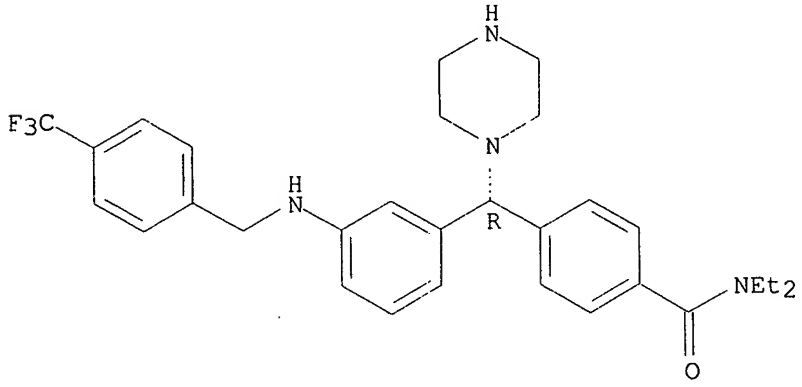
RN 691877-80-2 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(cyclohexylmethyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



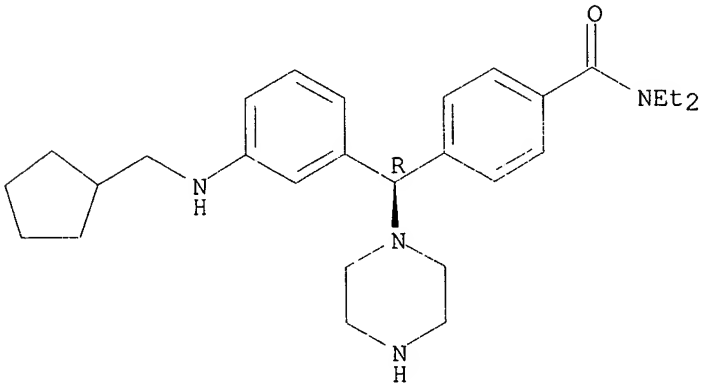
RN 691877-81-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-1-piperazinyl[3-[[[4-(trifluoromethyl)phenyl]methyl]amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 691877-82-4 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(cyclopentylmethyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl-, hydrochloride (5:3) (9CI) (CA INDEX NAME)

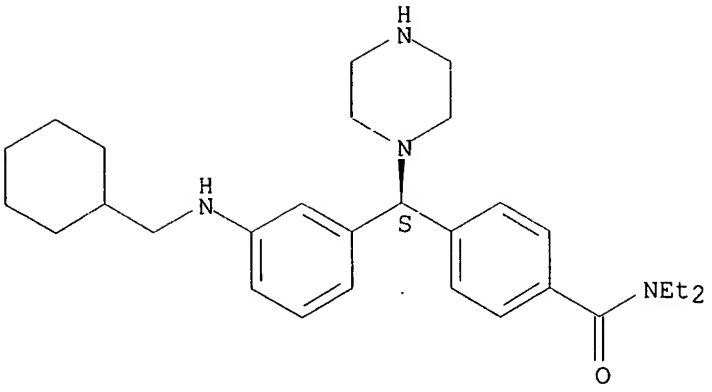
Absolute stereochemistry. Rotation (-).



●3/5 HCl

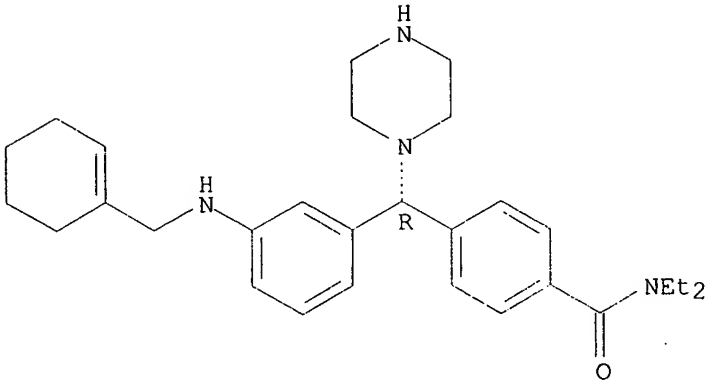
RN 691877-83-5 HCAPLUS
CN Benzamide, 4-[(S)-[3-[(cyclohexylmethyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



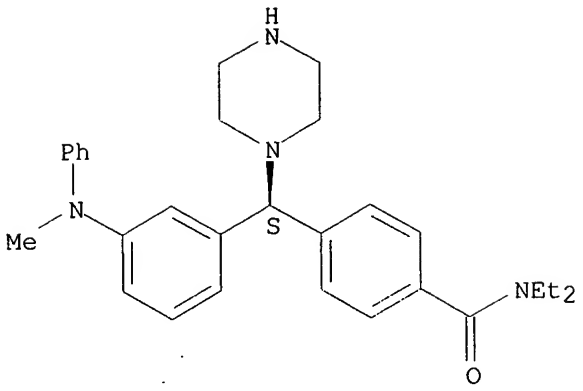
RN 691877-85-7 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(1-cyclohexen-1-ylmethyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 691877-86-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-(methylphenylamino)phenyl]-1-piperazinylmethyl]-, hydrochloride (9CI) (CA INDEX NAME)

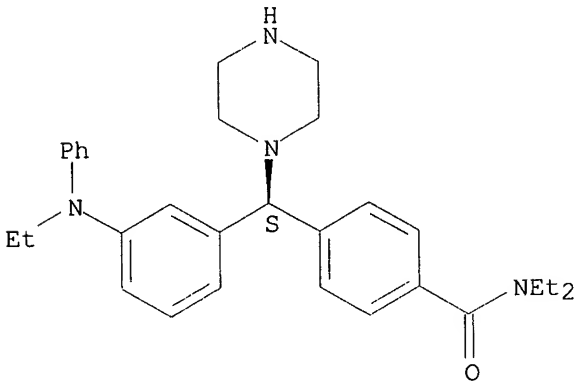
Absolute stereochemistry. Rotation (+).



● x HCl

RN 691877-87-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-(ethylphenylamino)phenyl]-1-piperazinylmethyl]-, hydrochloride (9CI) (CA INDEX NAME)

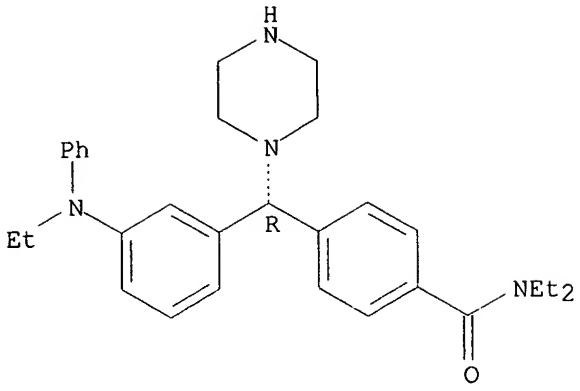
Absolute stereochemistry.



● x HCl

RN 691877-88-0 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-(ethylphenylamino)phenyl]-1-piperazinylmethyl]-, hydrochloride (9CI) (CA INDEX NAME)

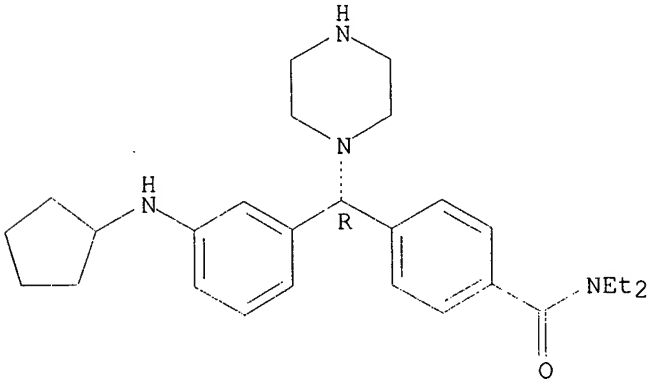
Absolute stereochemistry.



● x HCl

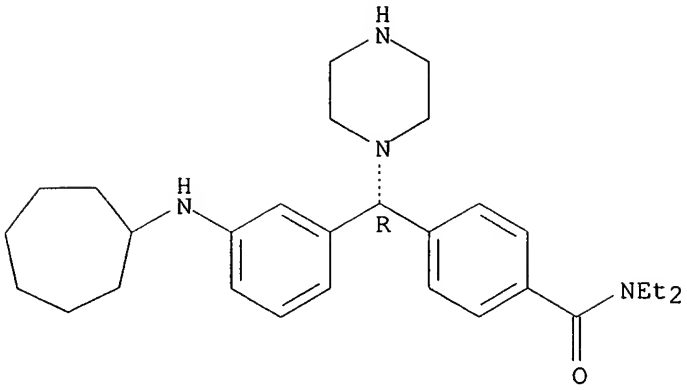
RN 691877-89-1 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclopentylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



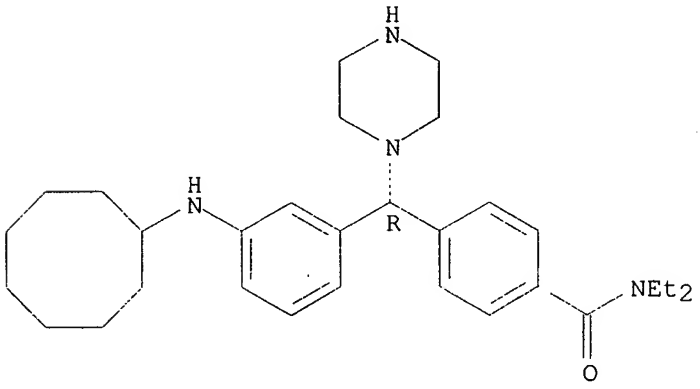
RN 691877-90-4 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cycloheptylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



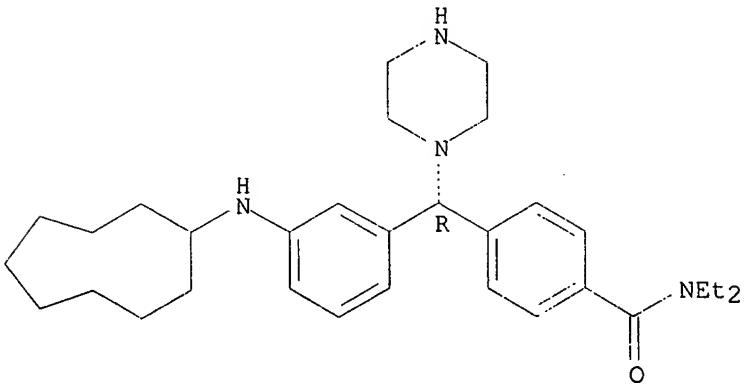
RN 691877-91-5 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclooctylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



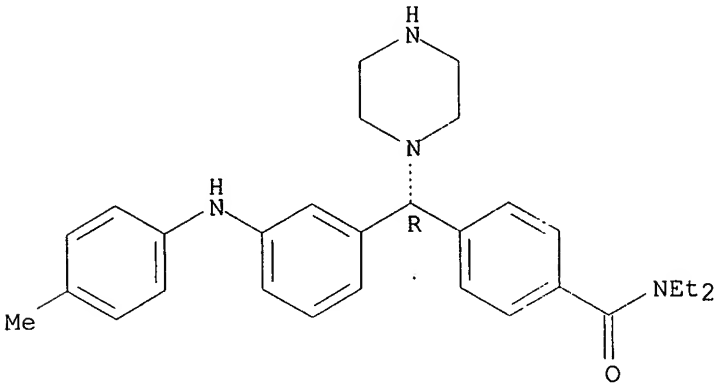
RN 691877-92-6 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclononylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 691877-94-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(4-methylphenyl)amino]phenyl]-1-piperazinylmethyl]-, hydrochloride (10:29) (9CI) (CA INDEX NAME)

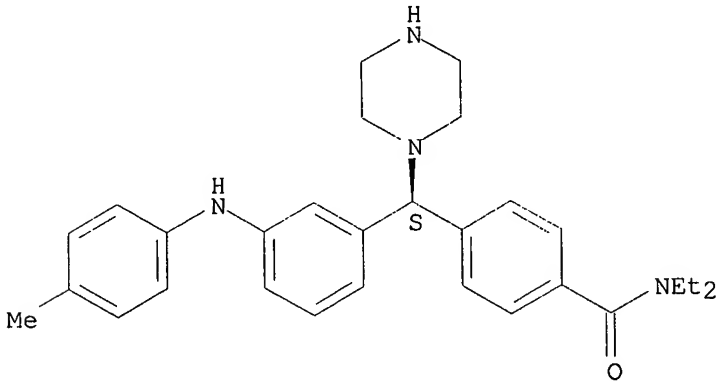
Absolute stereochemistry. Rotation (-).



●29/10 HCl

RN 691877-95-9 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(4-methylphenyl)amino]phenyl]-1-piperazinylmethyl]-, trihydrochloride (9CI) (CA INDEX NAME)

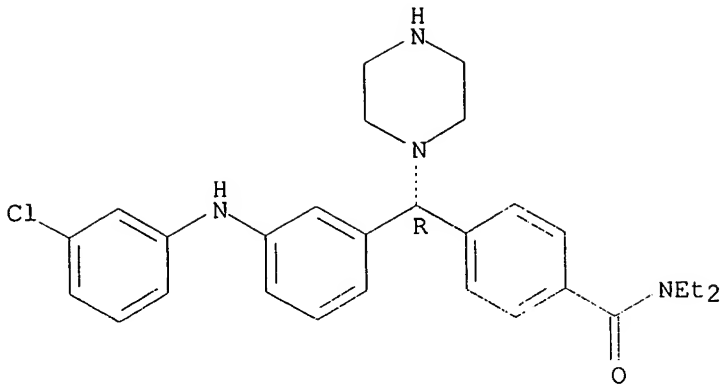
Absolute stereochemistry. Rotation (+).



●3 HCl

RN 691877-96-0 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(3-chlorophenyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl-, hydrochloride (10:29) (9CI) (CA INDEX NAME)

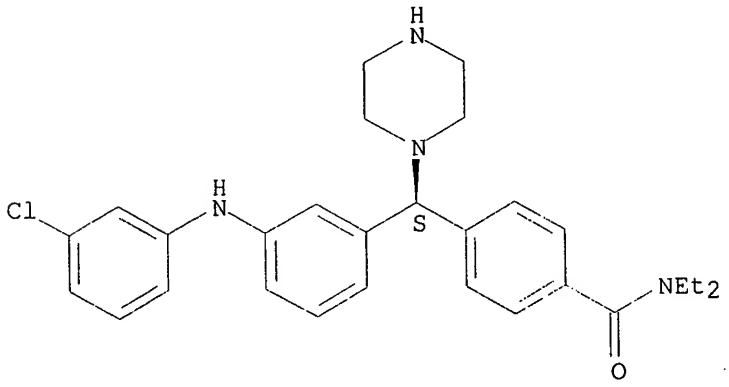
Absolute stereochemistry. Rotation (-).



●29/10 HCl

RN 691877-97-1 HCAPLUS
CN Benzamide, 4-[(S)-[3-[(3-chlorophenyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl-, hydrochloride (9CI) (CA INDEX NAME)

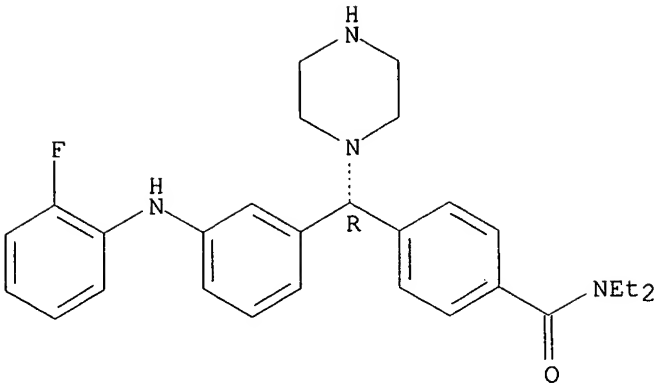
Absolute stereochemistry. Rotation (+).



●x HCl

RN 691877-98-2 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(2-fluorophenyl)amino]phenyl]-1-piperazinylmethyl]-, hydrochloride (10:29) (9CI) (CA INDEX NAME)

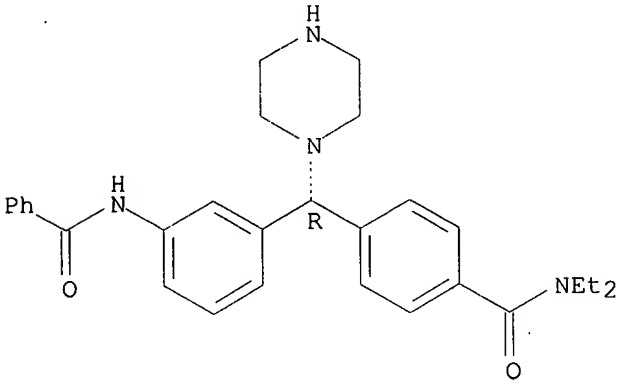
Absolute stereochemistry. Rotation (+).



●29/10 HCl

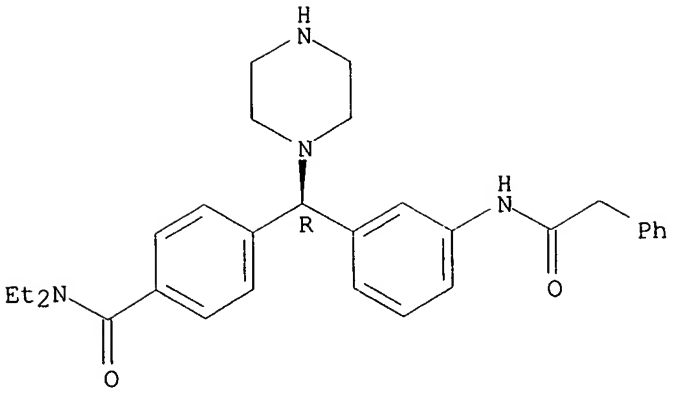
RN 691877-99-3 HCAPLUS
CN Benzamide, 4-[(R)-[3-(benzoylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



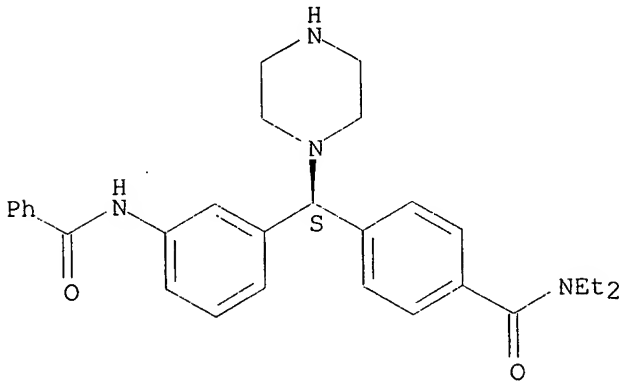
RN 691878-00-9 HCAPLUS
CN Benzeneacetamide, N-[3-[(R)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



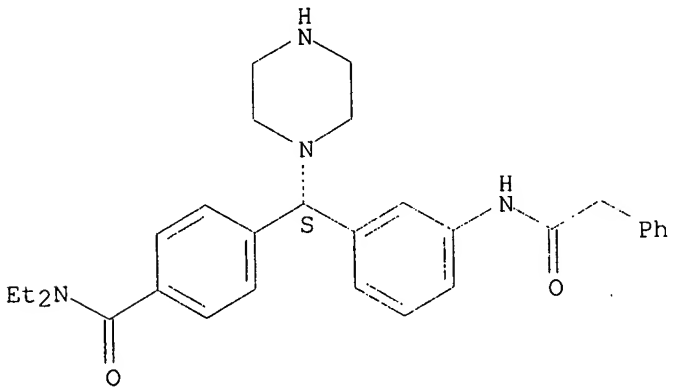
RN 691878-01-0 HCAPLUS
CN Benzamide, 4-[(S)-[3-(benzoylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



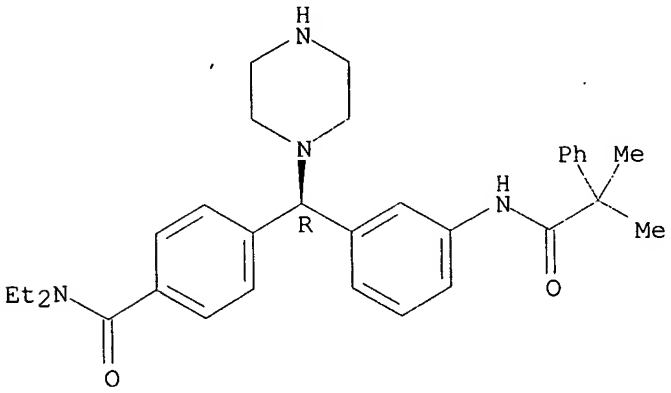
RN 691878-02-1 HCAPLUS
CN Benzeneacetamide, N-[3-[(S)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



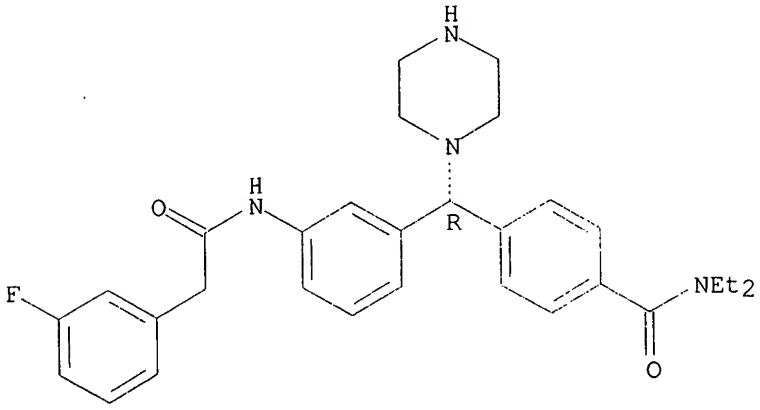
RN 691878-03-2 HCAPLUS
CN Benzeneacetamide, N-[3-[(R)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]-α,α-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



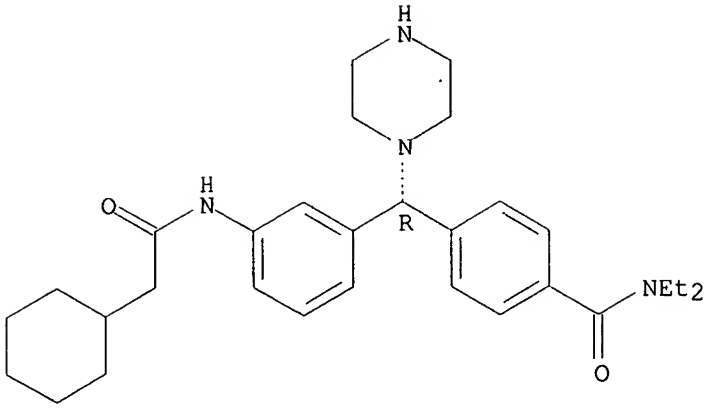
RN 691878-04-3 HCAPLUS
CN Benzeneacetamide, N-[3-[(R)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]-3-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



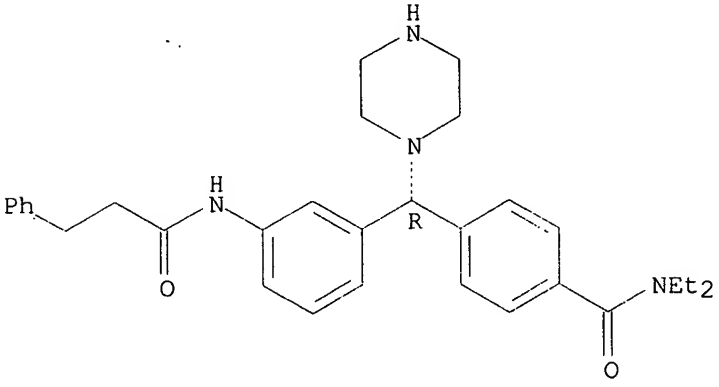
RN 691878-05-4 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(cyclohexylacetyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



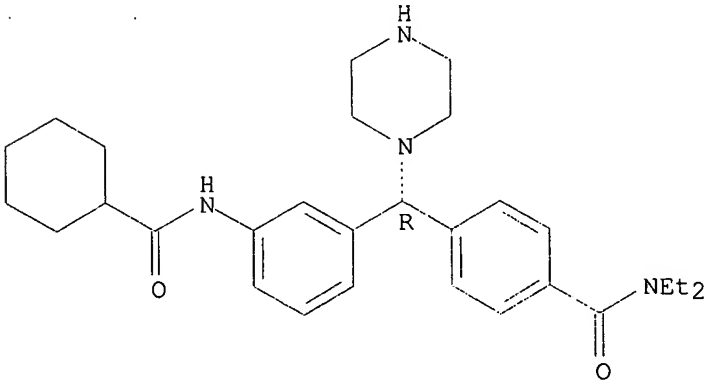
RN 691878-07-6 HCAPLUS
CN Benzenepropanamide, N-[3-[(R)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



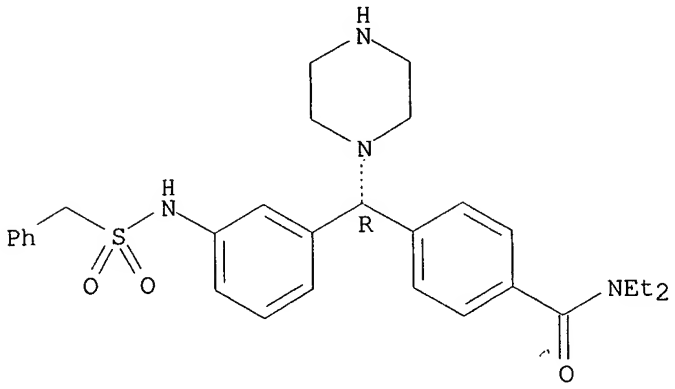
RN 691878-08-7 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(cyclohexylcarbonyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



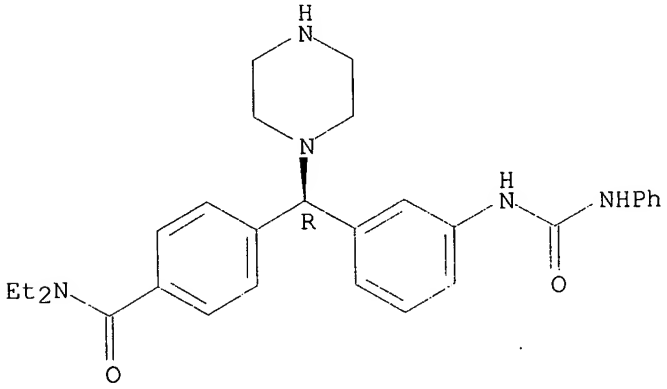
RN 691878-11-2 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[[(phenylmethyl)sulfonyl]amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



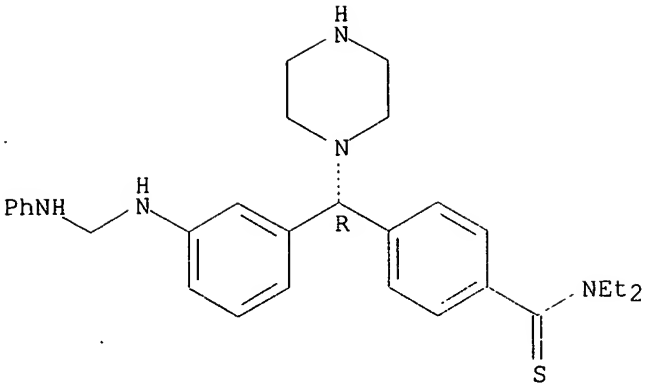
RN 691878-12-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[[(phenylamino)carbonyl]amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



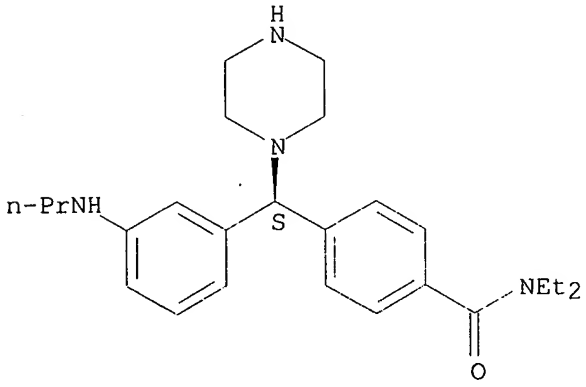
RN 691878-13-4 HCAPLUS
CN Benzenecarbothioamide, N,N-diethyl-4-[(R)-[3-[[(phenylamino)methyl]amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



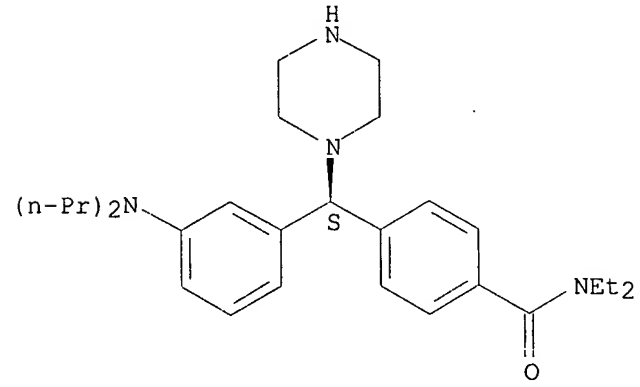
RN 691878-14-5 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-(propylamino)phenyl]methyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



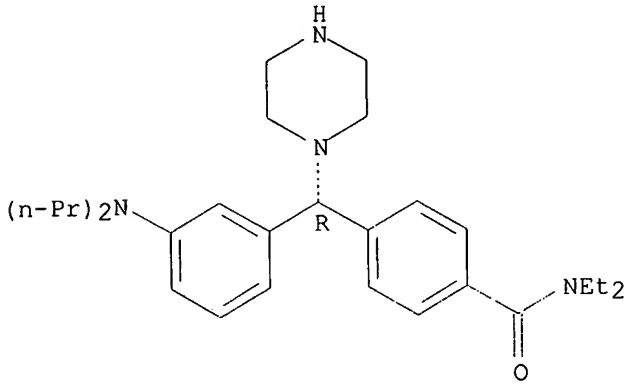
RN 691878-15-6 HCAPLUS
CN Benzamide, 4-[(S)-[3-(dipropylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



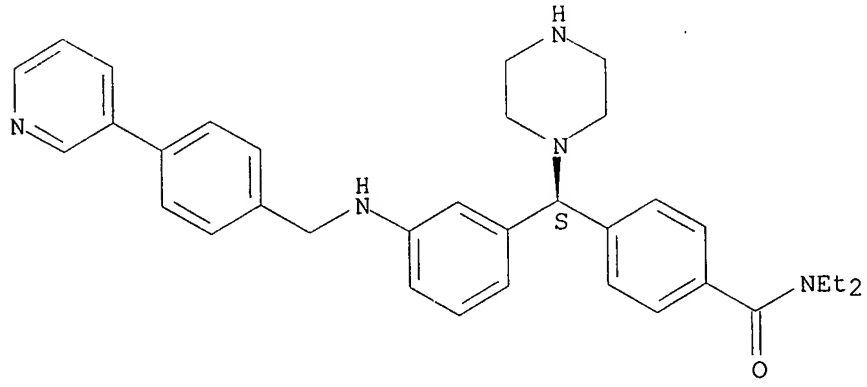
RN 691878-19-0 HCAPLUS
CN Benzamide, 4-[(R)-[3-(dipropylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



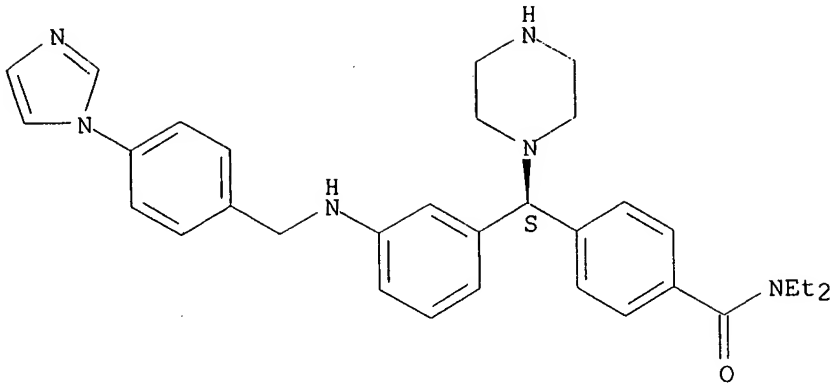
RN 691878-21-4 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[[[4-(3-pyridinyl)phenyl]methyl]amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



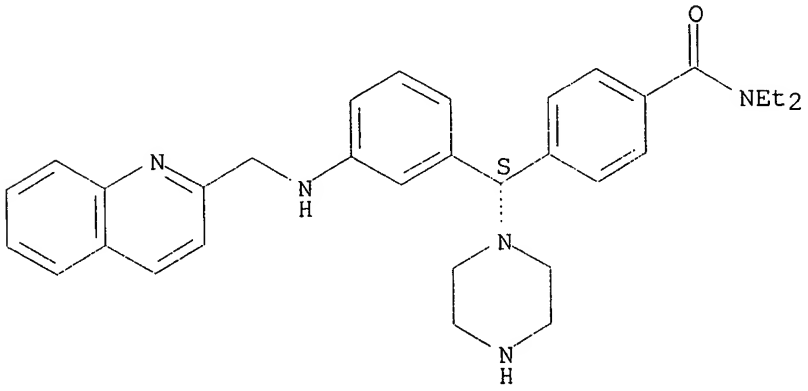
RN 691878-23-6 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[[[4-(1H-imidazol-1-yl)phenyl]methyl]amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



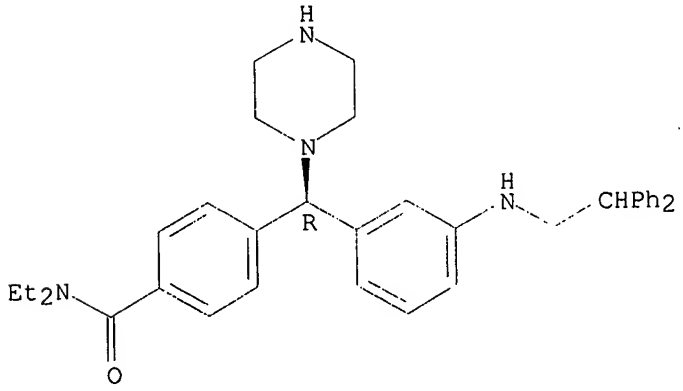
RN 691878-25-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-1-piperazinyl[3-[(2-quinolinylmethyl)amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



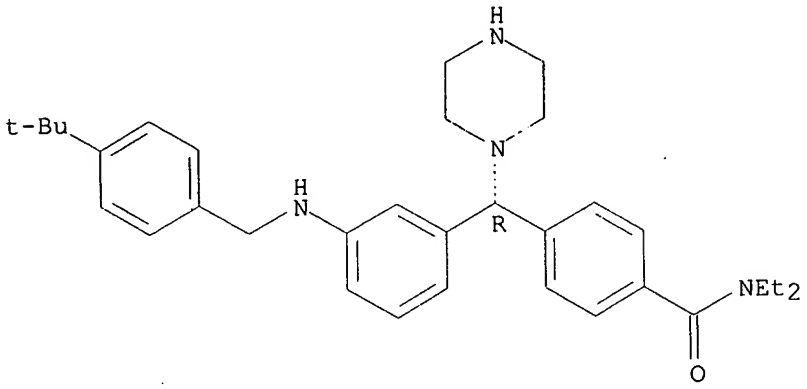
RN 691878-27-0 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(2,2-diphenylethyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



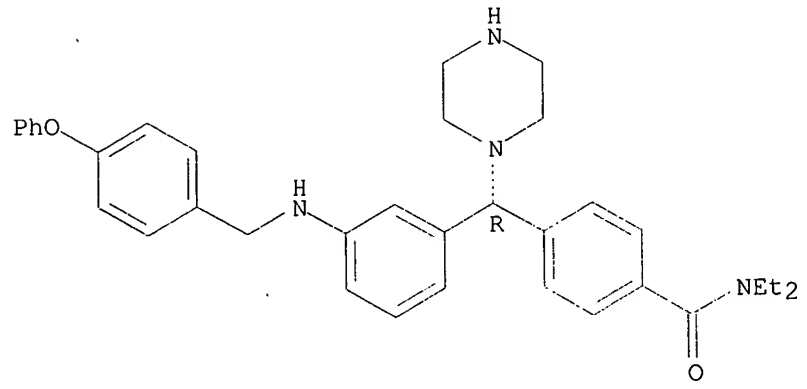
RN 691878-29-2 HCAPLUS
CN Benzamide, 4-[(R)-[3-[[[4-(1,1-dimethylethyl)phenyl]methyl]amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



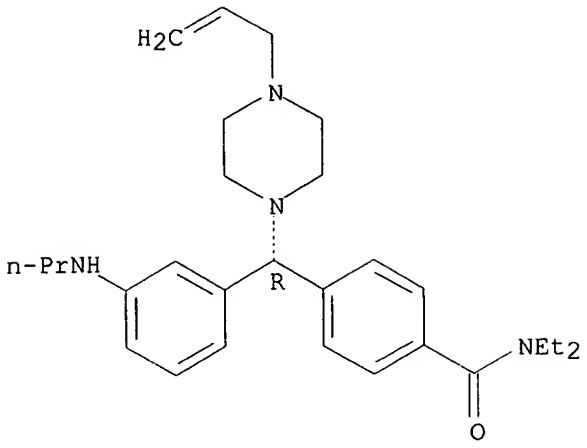
RN 691878-31-6 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[[(4-phenoxyphenyl)methyl]amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



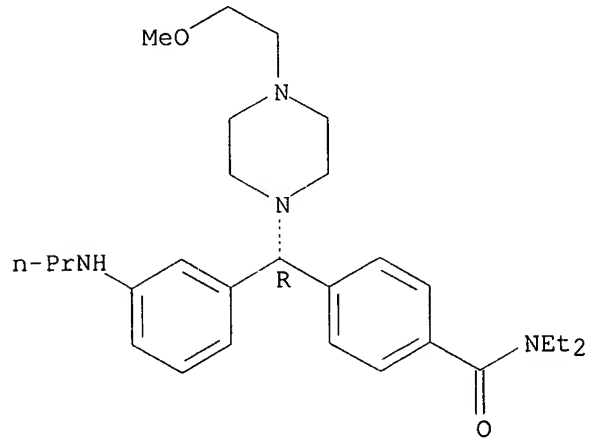
RN 691878-33-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(2-propenyl)-1-piperazinyl][3-(propylamino)phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



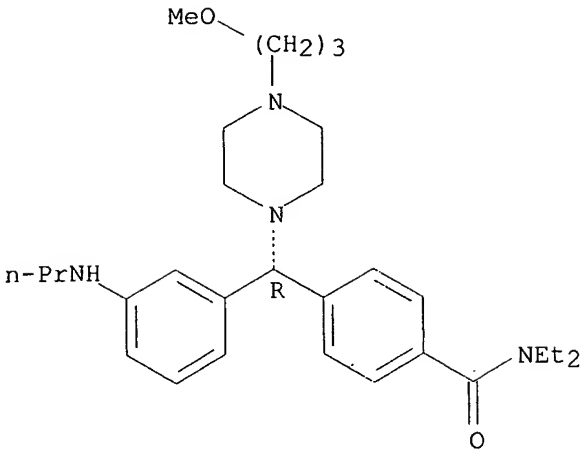
RN 691878-36-1 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(2-methoxyethyl)-1-piperazinyl][3-(propylamino)phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



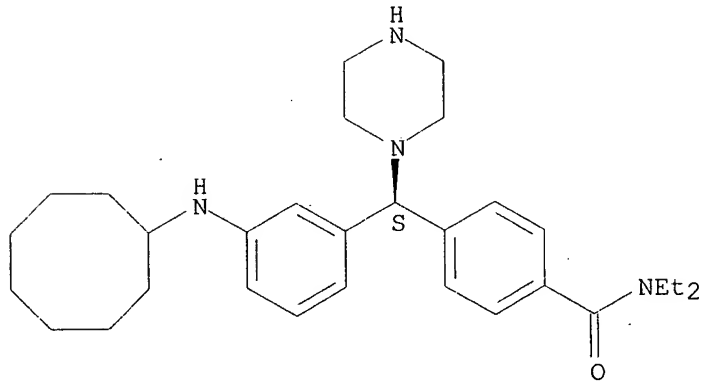
RN 691878-37-2 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(3-methoxypropyl)-1-piperazinyl][3-(propylamino)phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



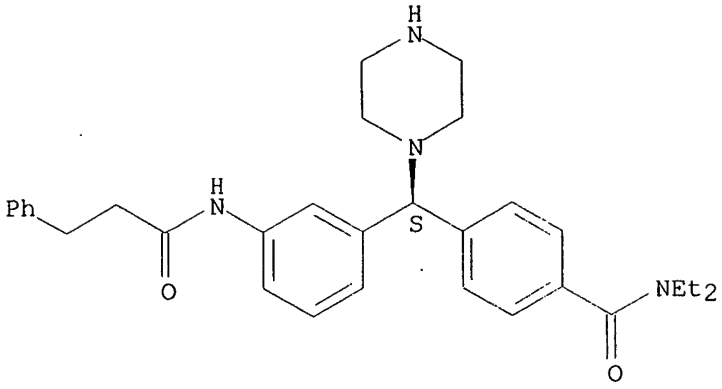
RN 691878-40-7 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclooctylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 691878-41-8 HCAPLUS
CN Benzenepropanamide, N-[3-[(S)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]-, hydrochloride (10:29) (9CI) (CA INDEX NAME)

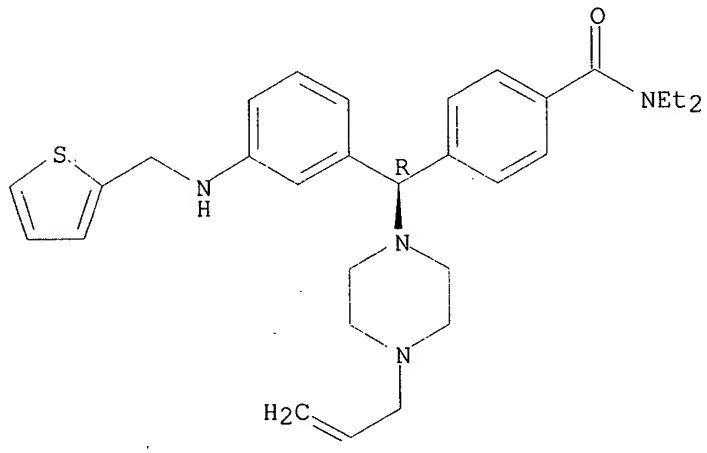
Absolute stereochemistry. Rotation (-).



●29/10 HCl

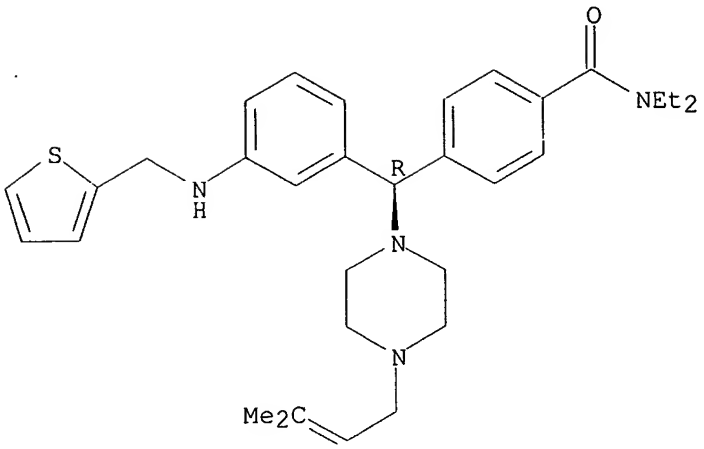
RN 691878-46-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(2-propenyl)-1-piperazinyl][3-[(2-thienylmethyl)amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



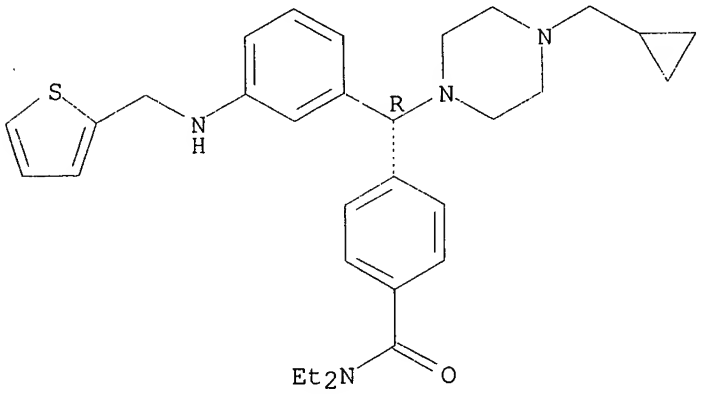
RN 691878-47-4 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[4-(3-methyl-2-butenyl)-1-piperazinyl][3-[(2-thienylmethyl)amino]phenyl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



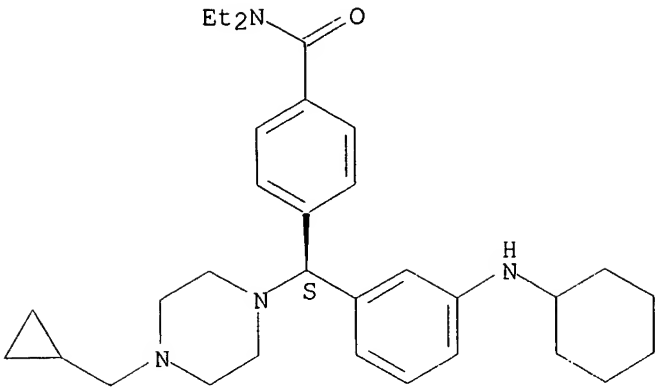
RN 691878-48-5 HCAPLUS
CN Benzamide, 4-[(R)-[4-(cyclopropylmethyl)-1-piperazinyl][3-[(2-thienylmethyl)amino]phenyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



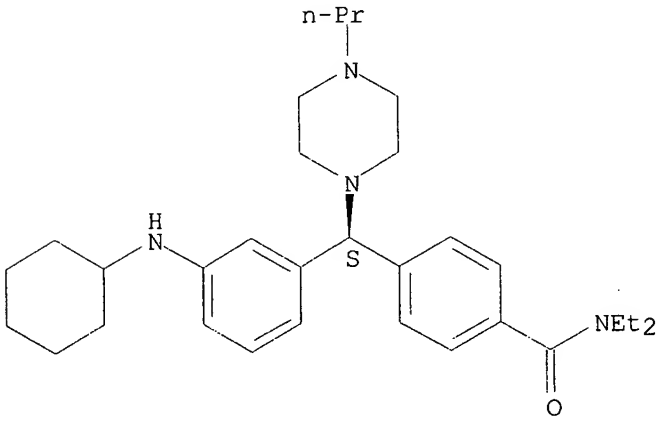
RN 691878-49-6 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl][4-(cyclopropylmethyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



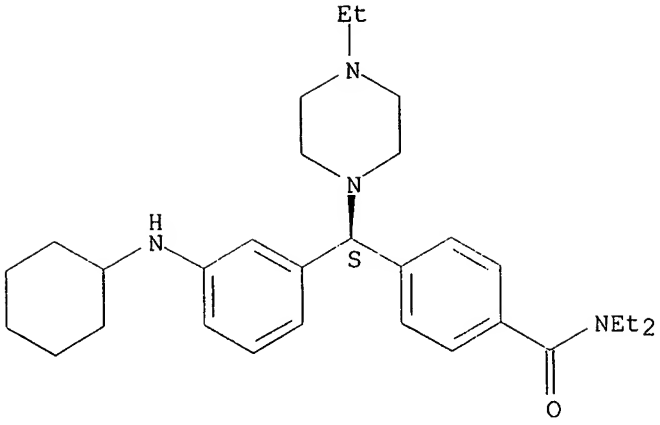
RN 691878-50-9 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl](4-propyl-1-piperazinyl)methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



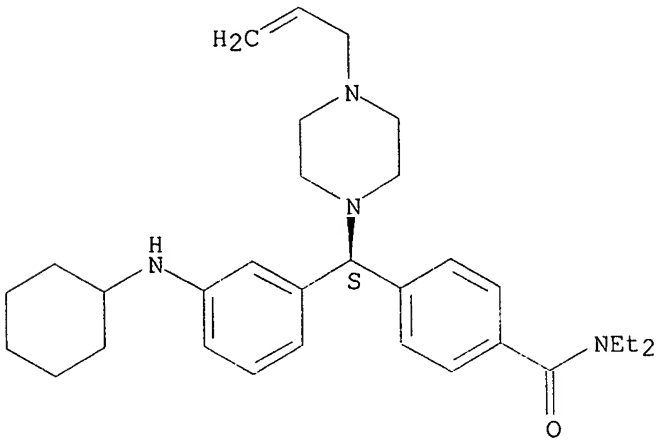
RN 691878-51-0 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl](4-ethyl-1-piperazinyl)methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



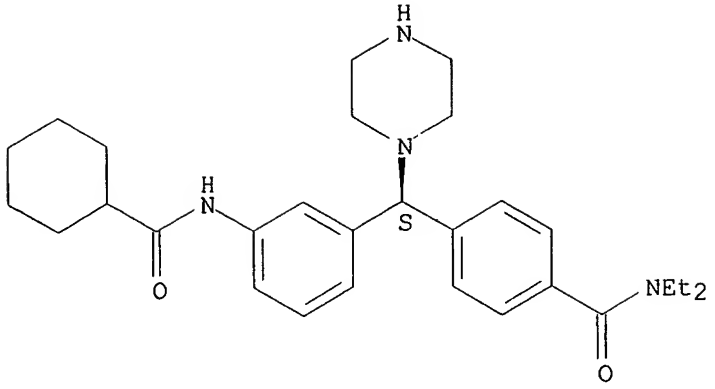
RN 691878-52-1 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylamino)phenyl][4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



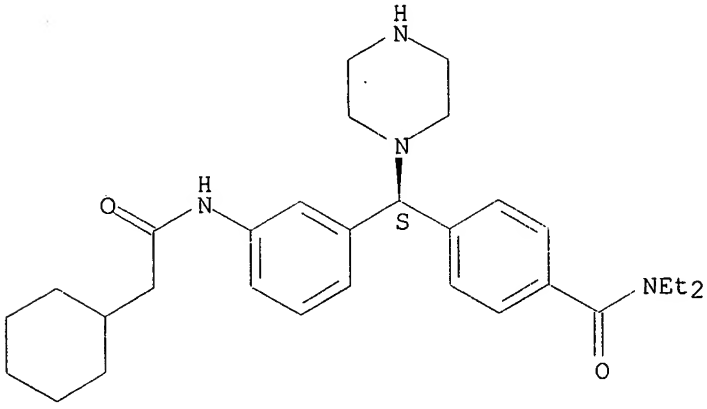
RN 691878-53-2 HCAPLUS
CN Benzamide, 4-[(S)-[3-[(cyclohexylcarbonyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



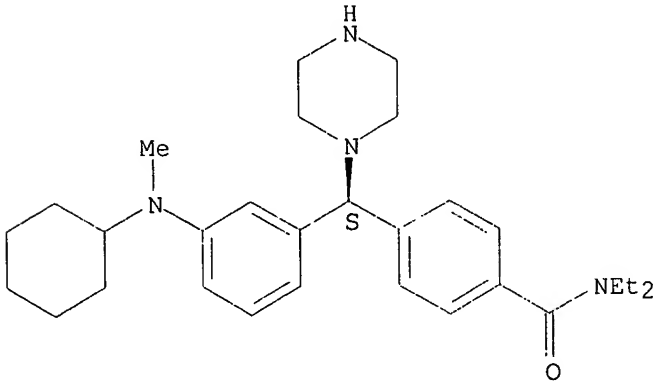
RN 691878-54-3 HCAPLUS
CN Benzamide, 4-[(S)-[3-[(cyclohexylacetyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



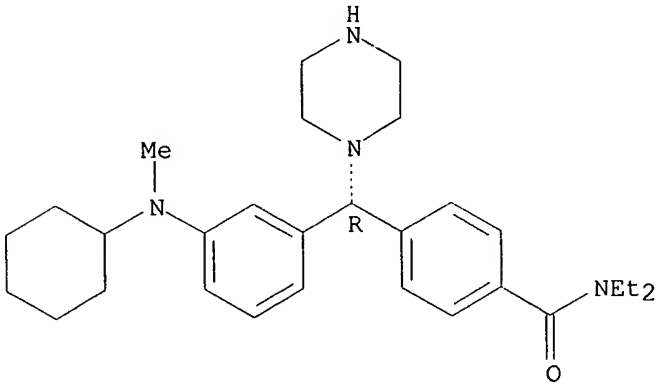
RN 691878-55-4 HCAPLUS
CN Benzamide, 4-[(S)-[3-(cyclohexylmethylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



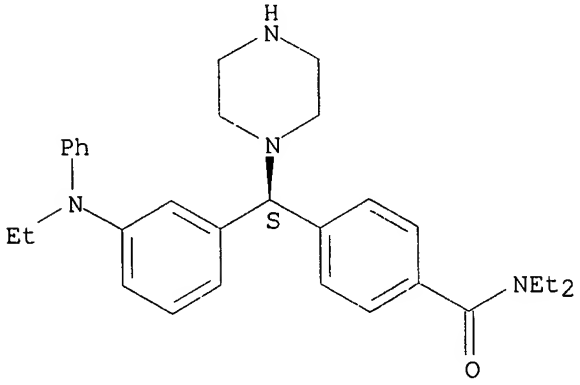
RN 691878-56-5 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclohexylmethylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



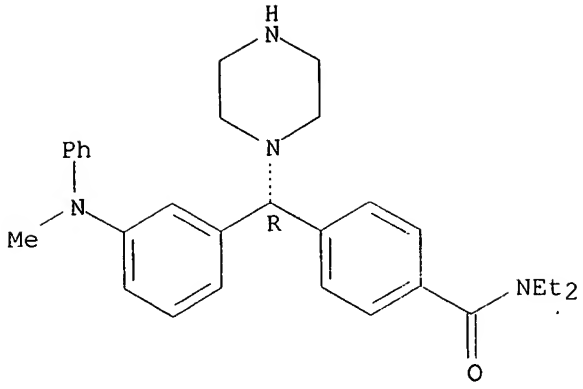
RN 691878-57-6 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-(ethylphenylamino)phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



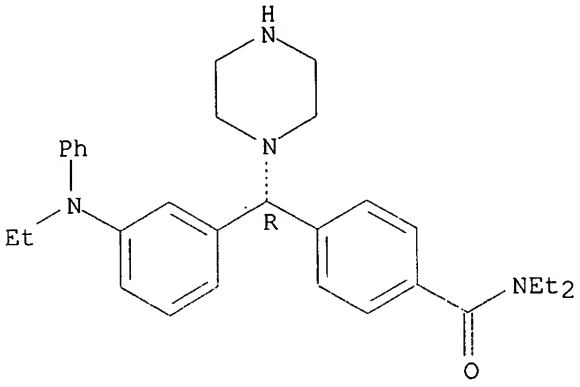
RN 691878-58-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-(methylphenylamino)phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



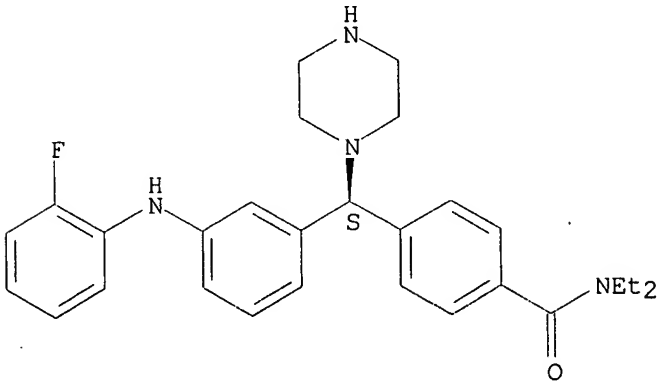
RN 691878-59-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-(ethylphenylamino)phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



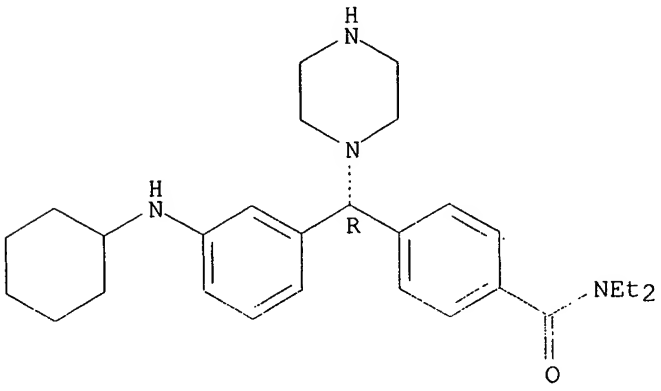
RN 691878-60-1 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(2-fluorophenyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



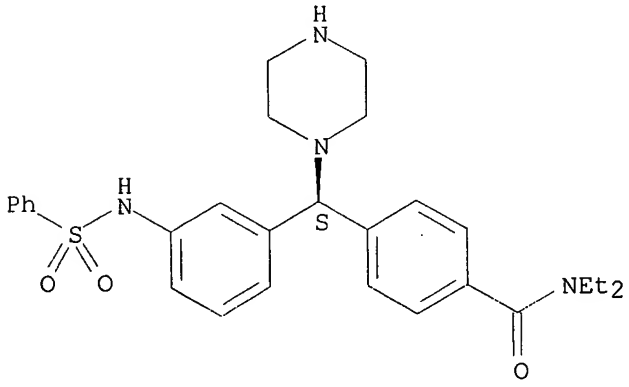
RN 691878-74-7 HCAPLUS
CN Benzamide, 4-[(R)-[3-(cyclohexylamino)phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



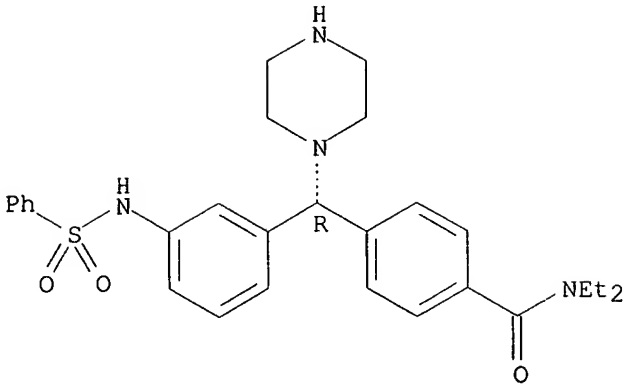
RN 691878-88-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(phenylsulfonyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



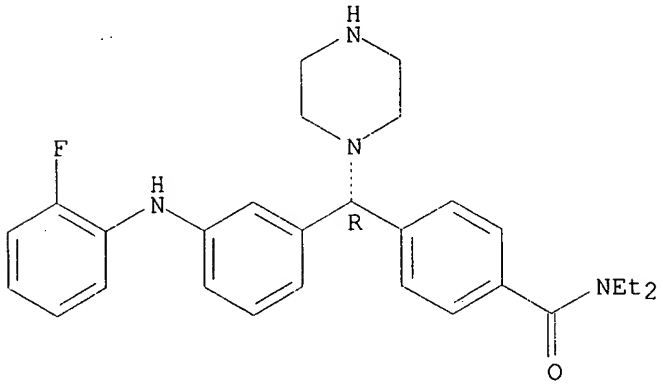
RN 691879-16-0 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(phenylsulfonyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



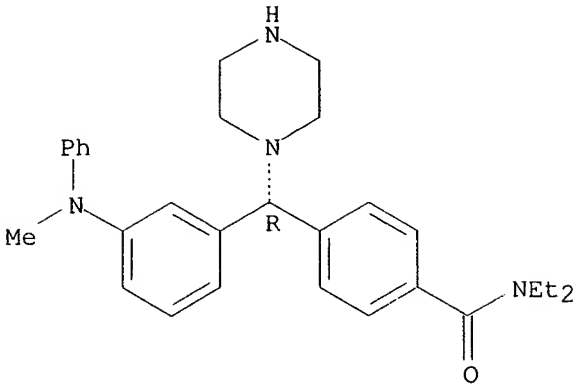
RN 692726-52-6 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(2-fluorophenyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 693259-12-0 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-(methylphenylamino)phenyl]-1-piperazinylmethyl]-, hydrochloride (9CI) (CA INDEX NAME)

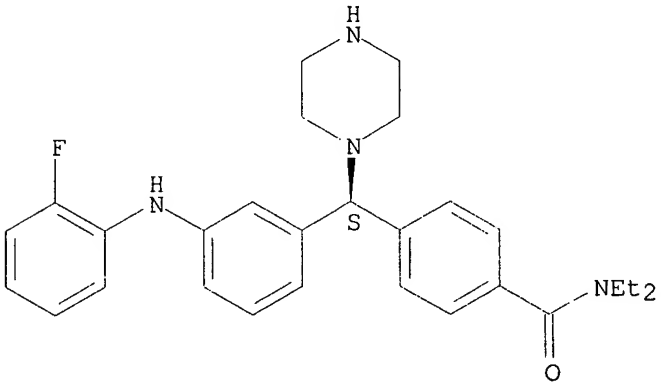
Absolute stereochemistry.



●x HCl

RN 693259-13-1 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(2-fluorophenyl)amino]phenyl]-1-piperazinylmethyl]-, trihydrochloride (9CI) (CA INDEX NAME)

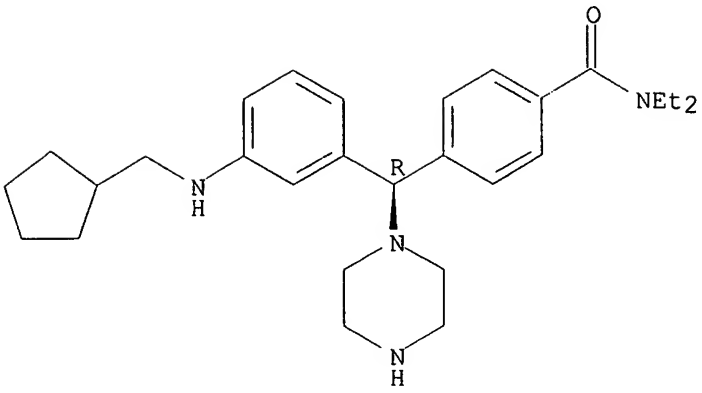
Absolute stereochemistry.



●3 HCl

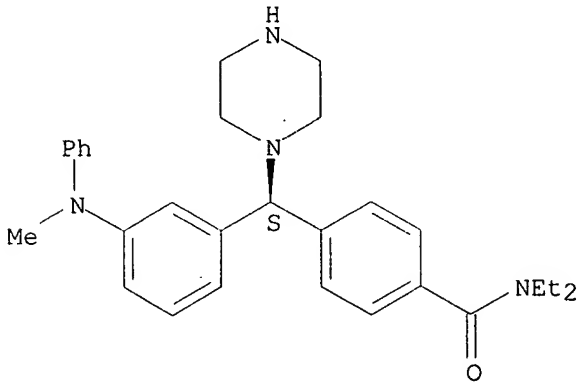
RN 693259-14-2 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(cyclopentylmethyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



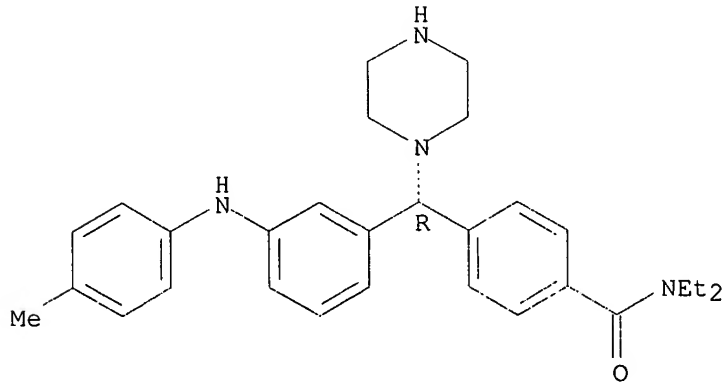
RN 693259-15-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-(methylphenylamino)phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



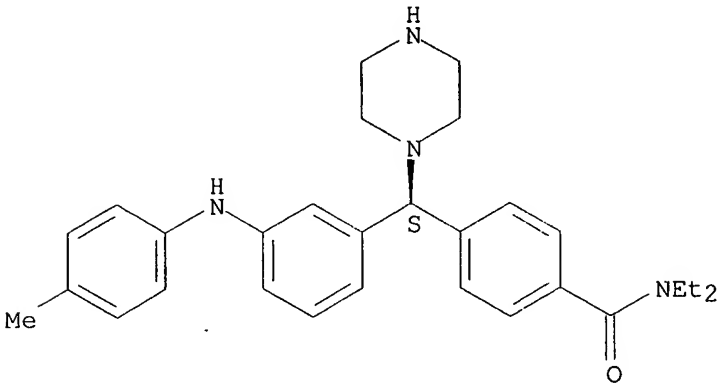
RN 693259-16-4 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(R)-[3-[(4-methylphenyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



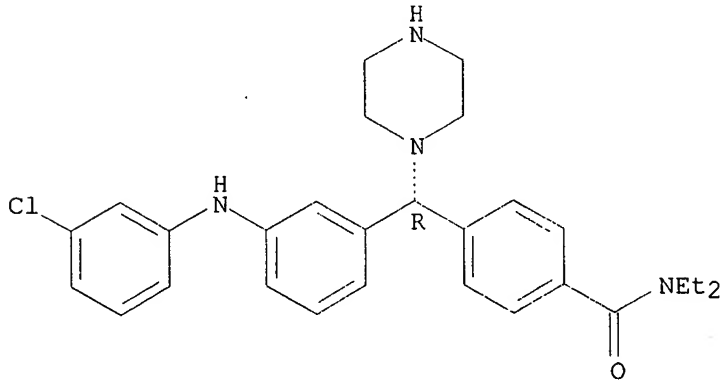
RN 693259-17-5 HCAPLUS
CN Benzamide, N,N-diethyl-4-[(S)-[3-[(4-methylphenyl)amino]phenyl]-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



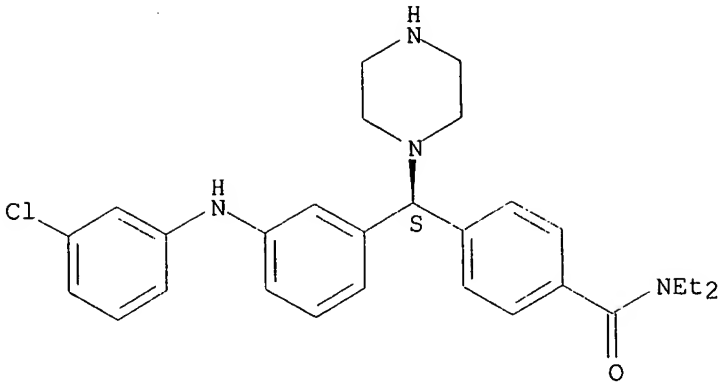
RN 693259-18-6 HCAPLUS
CN Benzamide, 4-[(R)-[3-[(3-chlorophenyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



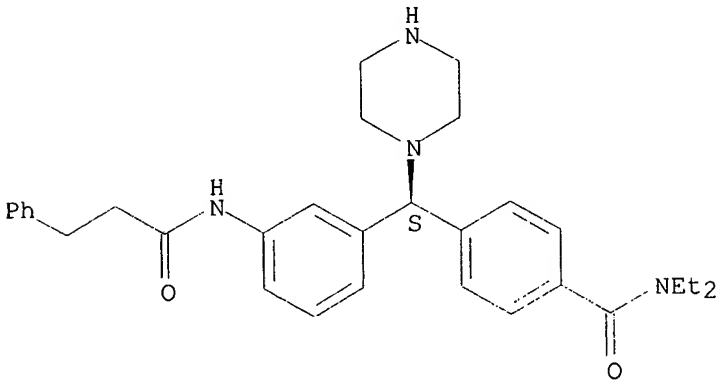
RN 693259-19-7 HCAPLUS
CN Benzamide, 4-[(S)-[3-[(3-chlorophenyl)amino]phenyl]-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 693259-20-0 HCAPLUS
CN Benzenepropanamide, N-[3-[(S)-[4-[(diethylamino)carbonyl]phenyl]-1-piperazinylmethyl]phenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L6 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:412930 HCAPLUS
DOCUMENT NUMBER: 140:423707
TITLE: Preparation of 4-(**phenylpiperazinylmethyl**)benzamides for treatment of pain or gastrointestinal disorders
INVENTOR(S): **Brown, William; Griffin, Andrew;** Plobeck, Niklas; Walpole, Christopher
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004041800	A1	20040521	WO 2003-SE1703	20031105

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

← PRIORITY DATE

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2502733	AA	20040521	CA 2003-2502733		20031105
AU 2003274884	A1	20040607	AU 2003-274884		20031105
EP 1562922	A1	20050817	EP 2003-759164		20031105
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BR 2003015998	A	20050920	BR 2003-15998		20031105
JP 2006507296	T2	20060302	JP 2004-549772		20031105
NO 2005002699	A	20050606	NO 2005-2699		20050606
PRIORITY APPLN. INFO.:			SE 2002-3300	A	20021107
			WO 2003-SE1703	W	20031105

OTHER SOURCE(S): MARPAT 140:423707
GI

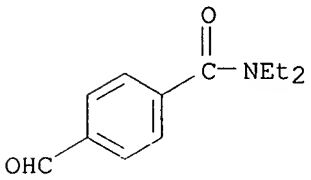
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [wherein R1 = (un)substituted (hetero)aryl; R2 = H or (un)substituted alkyl, aryl, or heterocyclyl; or pharmaceutically acceptable salts, enantiomers, or mixts. thereof] were prepared as opioid δ receptor ligands. For example, 4-carboxybenzaldehyde was amidated with diethylamine using SOCl2 in CH2Cl2 to give N,N-diethyl-4-formylbenzamide (90%). Coupling of the amide with 1-piperazinecarboxylic acid 1,1-dimethylethyl ester in the presence of benzotriazole in toluene, followed by reaction with 3-cyanophenylzinc iodide in THF, afforded 4-[(3-cyanophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]-1-piperazinecarboxylic acid 1,1-dimethylethyl ester. Deprotection of the piperazine (39%) using TFA in CH2Cl2 and alkylation (57%) with benzaldehyde in the presence of sodium triacetoxyborohydride in CH2Cl2 provided 3-[[4-[(diethylamino)carbonyl]phenyl](4-benzylpiperazin-1-yl)methyl]benzonitrile. Conversion of the nitrile to the amide with KOH in t-BuOH and chiral HPLC separation of the enantiomers gave (-)-II (99% optical purity). In binding assays using human 293S cells expressing cloned human opioid receptors and neomycin resistance, (-)-II proved to be an effective δ receptor ligand (IC50 = 0.26 nM) and showed some activity toward the κ (IC50 = 112 nM) and μ (IC50 = 7.7 nM) receptors. In functional assays, (-)-II demonstrated δ receptor agonist activity by activating the binding of GTP to G-proteins. Thus, I and their pharmaceutical compns. are useful in therapy, in particular for the treatment of gastrointestinal disorders or the management of pain (no data).

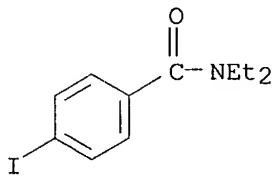
IT **58287-77-7P**, N,N-Diethyl-4-formylbenzamide **77350-52-8P**, 4-Iodo-N,N-diethylbenzamide **691358-43-7P**, 4-[(3-Cyanophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]-1-piperazinecarboxylic acid 1,1-dimethylethyl ester **691358-44-8P**, 4-[(3-Cyanophenyl)piperazin-1-ylmethyl]-N,N-diethylbenzamide **691358-45-9P**, 3-[[4-[(Diethylamino)carbonyl]phenyl](4-benzylpiperazin-1-yl)methyl]benzonitrile **691358-46-0P**, 3-[[4-[(Diethylamino)carbonyl]phenyl][4-(2-furylmethyl)piperazin-1-yl]methyl]benzonitrile **691358-47-1P**, 3-[[4-

[(Diethylamino)carbonyl]phenyl]hydroxymethyl]benzoic acid methyl ester **691358-48-2P**, 4-[[4-[(Diethylamino)carbonyl]phenyl][3-(methoxycarbonyl)phenyl]methyl]-1-piperazinecarboxylic acid 1,1-dimethylethyl ester **691358-49-3P**, 3-[[4-[(Diethylamino)carbonyl]phenyl][4-(phenylmethyl)-1-**piperazinyl**]methyl]benzoic acid methyl ester **691358-50-6P**, 3-[[4-[(Diethylamino)carbonyl]phenyl][4-(phenylmethyl)-1-**piperazinyl**]methyl]benzoic acid
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain or gastrointestinal disorders)

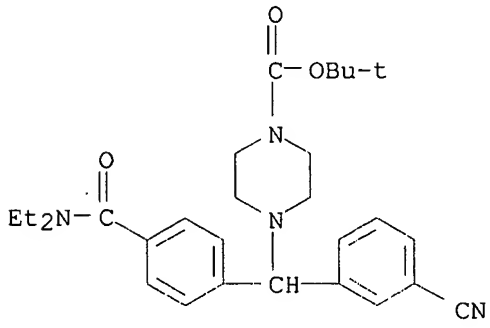
RN 58287-77-7 HCAPLUS
CN Benzamide, N,N-diethyl-4-formyl- (9CI) (CA INDEX NAME)



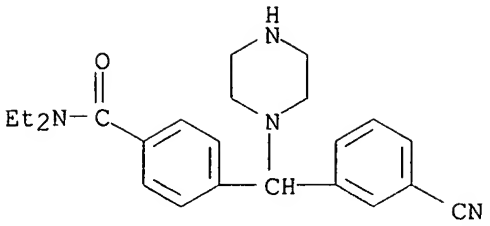
RN 77350-52-8 HCAPLUS
CN Benzamide, N,N-diethyl-4-iodo- (9CI) (CA INDEX NAME)



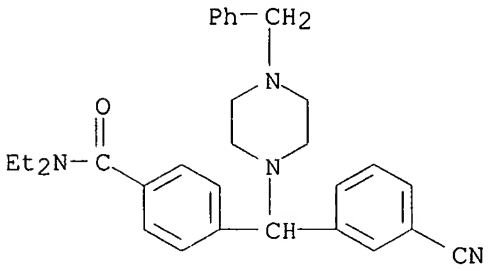
RN 691358-43-7 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[(3-cyanophenyl)[4-[(diethylamino)carbonyl]phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



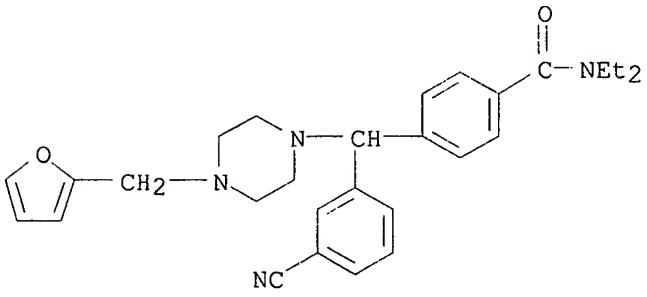
RN 691358-44-8 HCAPLUS
CN Benzamide, 4-[(3-cyanophenyl)-1-piperazinylmethyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



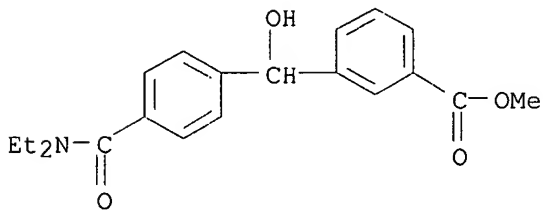
RN 691358-45-9 HCAPLUS
CN Benzamide, 4-[(3-cyanophenyl)[4-(phenylmethyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



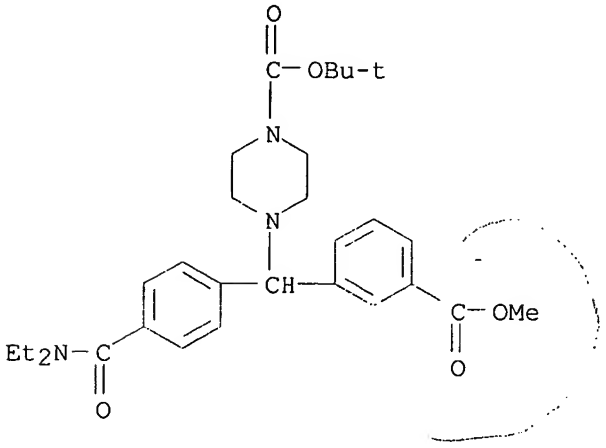
RN 691358-46-0 HCAPLUS
CN Benzamide, 4-[(3-cyanophenyl)[4-(2-furanylmethyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



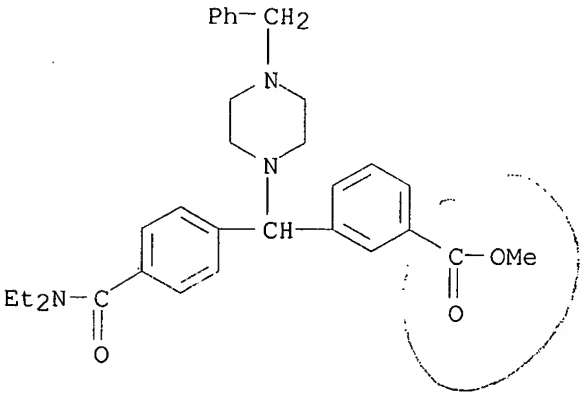
RN 691358-47-1 HCAPLUS
CN Benzoic acid, 3-[[4-[(diethylamino)carbonyl]phenyl]hydroxymethyl]-, methyl ester (9CI) (CA INDEX NAME)



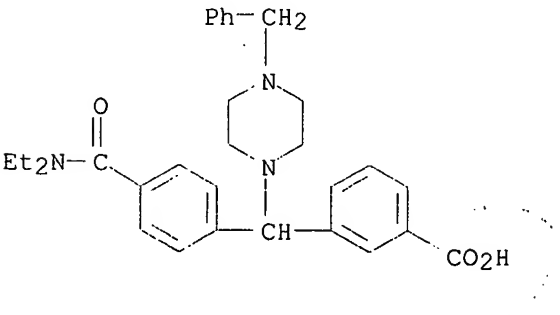
RN 691358-48-2 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[[4-[(diethylamino)carbonyl]phenyl][3-(methoxycarbonyl)phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 691358-49-3 HCAPLUS
CN Benzoic acid, 3-[[4-[(diethylamino)carbonyl]phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]-, methyl ester (9CI) (CA INDEX NAME)

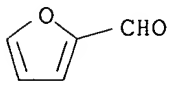


RN 691358-50-6 HCAPLUS
CN Benzoic acid, 3-[[4-[(diethylamino)carbonyl]phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)

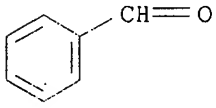


IT **98-01-1**, 2-Furaldehyde, reactions **100-52-7**, Benzaldehyde, reactions **109-89-7**, Diethylamine, reactions **619-66-9**, 4-Carboxybenzaldehyde **1711-02-0**, 4-Iodobenzoyl chloride **52178-50-4**, 3-Carbomethoxybenzaldehyde **57260-71-6**, 1-Piperazinecarboxylic acid 1,1-dimethylethyl ester **288309-53-5**, (3-Cyanophenyl)zinc iodide
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain or gastrointestinal disorders)

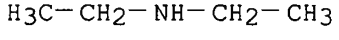
RN 98-01-1 HCAPLUS
CN 2-Furancarboxaldehyde (9CI) (CA INDEX NAME)



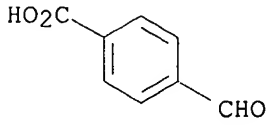
RN 100-52-7 HCAPLUS
CN Benzaldehyde (7CI, 8CI, 9CI) (CA INDEX NAME)



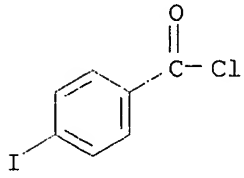
RN 109-89-7 HCAPLUS
CN Ethanamine, N-ethyl- (9CI) (CA INDEX NAME)



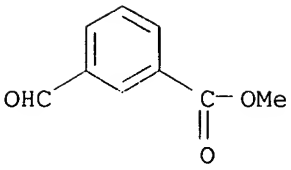
RN 619-66-9 HCAPLUS
CN Benzoic acid, 4-formyl- (9CI) (CA INDEX NAME)



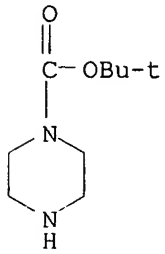
RN 1711-02-0 HCAPLUS
CN Benzoyl chloride, 4-iodo- (9CI) (CA INDEX NAME)



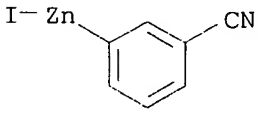
RN 52178-50-4 HCAPLUS
CN Benzoic acid, 3-formyl-, methyl ester (9CI) (CA INDEX NAME)



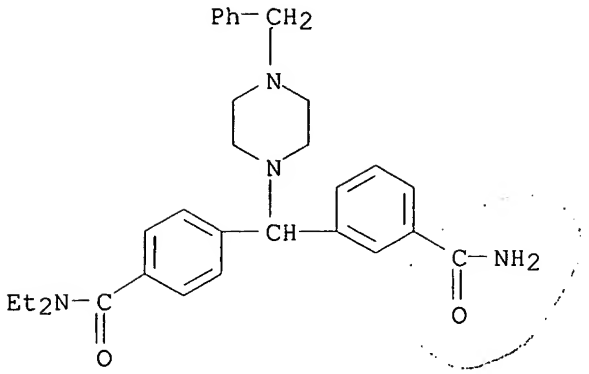
RN 57260-71-6 HCAPLUS
CN 1-Piperazinecarboxylic acid, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



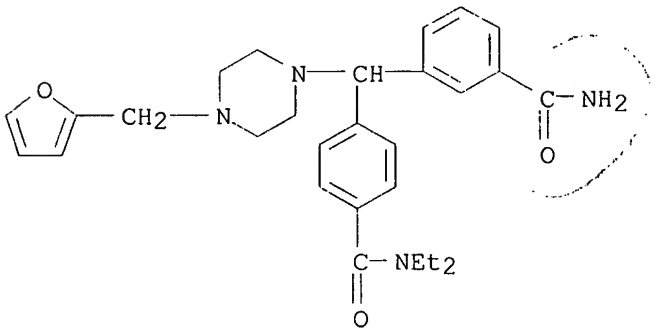
RN 288309-53-5 HCAPLUS
CN Zinc, (3-cyanophenyl)iodo- (9CI) (CA INDEX NAME)



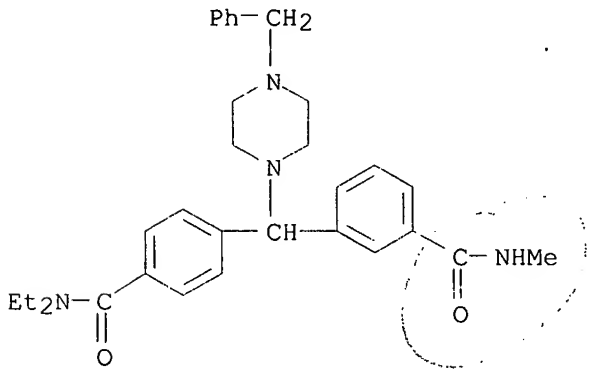
IT **691358-51-7P**, 3-[[4-[(Diethylamino)carbonyl]phenyl](4-benzylpiperazin-1-yl)methyl]benzamide **691358-56-2P**, 3-[[4-[(Diethylamino)carbonyl]phenyl][4-(2-furylmethyl)piperazin-1-yl]methyl]benzamide **691358-62-0P**, 3-[[4-[(Diethylamino)carbonyl]phenyl][4-(phenylmethyl)-1-**piperazinyl**]methyl]-N-methylbenzamide
RL: PAC (Pharmacological activity); PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(δ receptor agonist; preparation of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain or gastrointestinal disorders)
RN 691358-51-7 HCAPLUS
CN Benzamide, 4-[[3-(aminocarbonyl)phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



RN 691358-56-2 HCAPLUS
CN Benzamide, 4-[[3-(aminocarbonyl)phenyl][4-(2-furanylmethyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



RN 691358-62-0 HCAPLUS
CN Benzamide, N,N-diethyl-4-[[3-[(methylamino)carbonyl]phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



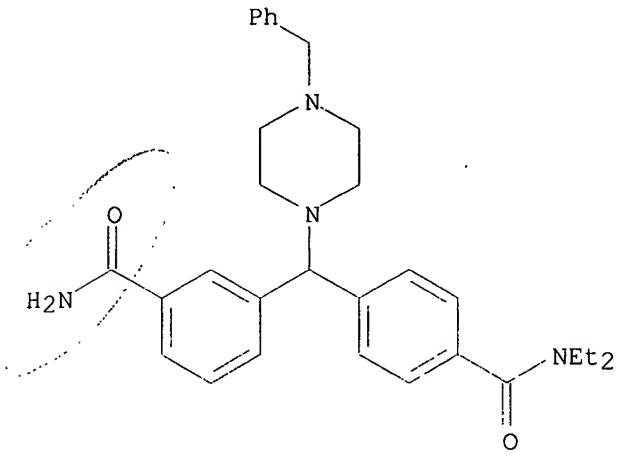
IT **691883-84-8P 691883-85-9P 691883-86-0P**
691883-87-1P 691883-88-2P 691883-89-3P
RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(δ receptor agonist; preparation of (**phenylpiperazinylmethyl**)benzamides as δ receptor agonists for treatment of pain or gastrointestinal disorders)

RN 691883-84-8 HCAPLUS

CN Benzamide, 4-[[3-(aminocarbonyl)phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (5:16), (-)- (9CI) (CA INDEX NAME)

Rotation (-).

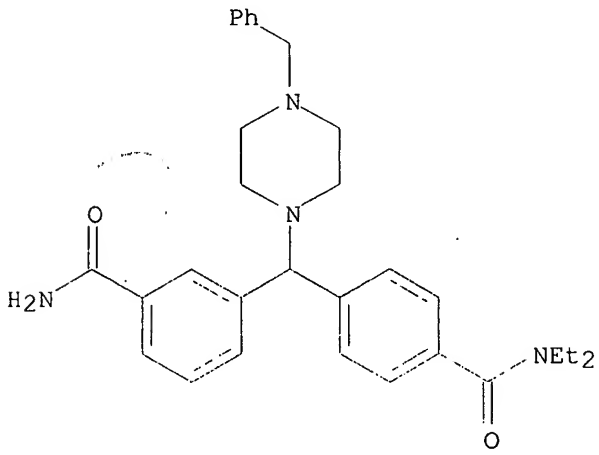


●16/5 HCl

RN 691883-85-9 HCAPLUS

CN Benzamide, 4-[[3-(aminocarbonyl)phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (10:31), (+)- (9CI) (CA INDEX NAME)

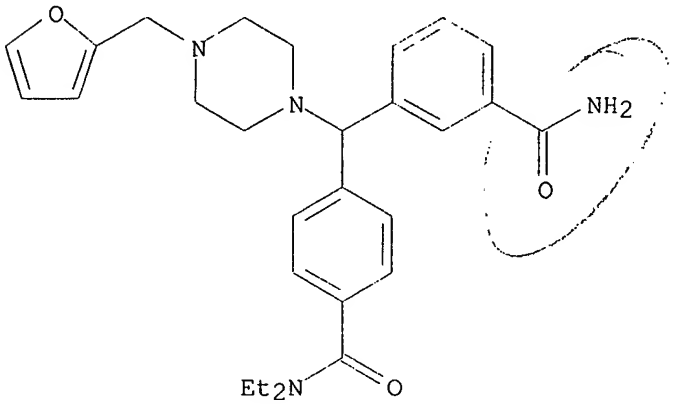
Rotation (+).



●31/10 HCl

RN 691883-86-0 HCAPLUS
CN Benzamide, 4-[[3-(aminocarbonyl)phenyl][4-(2-furanylmethyl)-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (5:13), (-)- (9CI) (CA INDEX NAME)

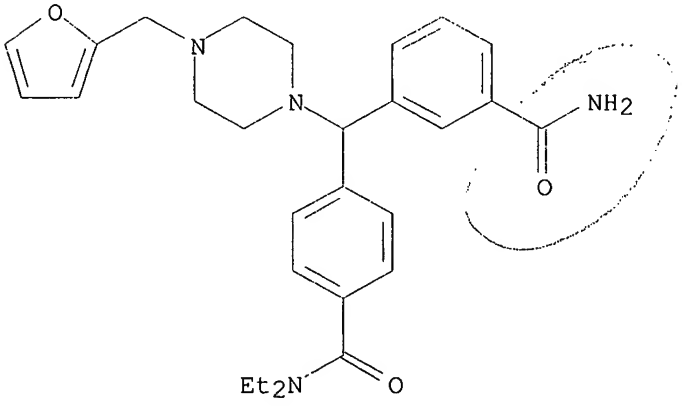
Rotation (-).



●13/5 HCl

RN 691883-87-1 HCAPLUS
CN Benzamide, 4-[[3-(aminocarbonyl)phenyl][4-(2-furanylmethyl)-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (10:7), (+)- (9CI) (CA INDEX NAME)

Rotation (+).



●7/10 HCl

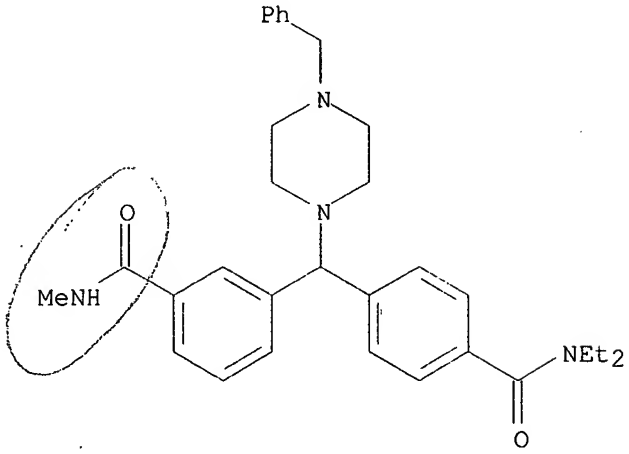
RN 691883-88-2 HCAPLUS
CN Benzamide, N,N-diethyl-4-[[3-[(methylamino)carbonyl]phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]-, (-)-, trifluoroacetate (5:8) (9CI)

(CA INDEX NAME)

CM 1

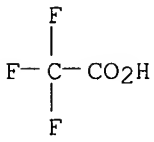
CRN 691358-63-1
CMF C31 H38 N4 O2

Rotation (-).



CM 2

CRN 76-05-1
CMF C2 H F3 O2

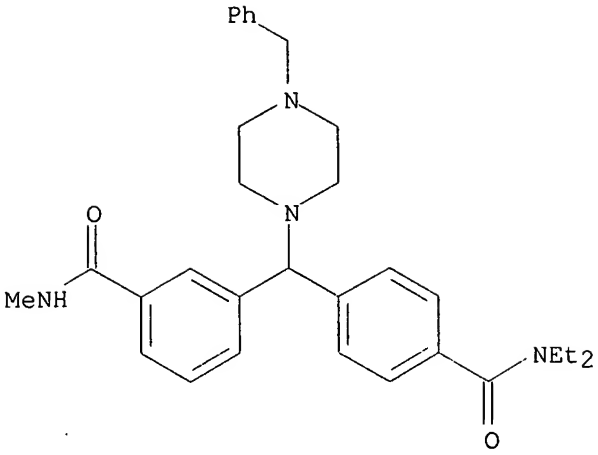


RN 691883-89-3 HCAPLUS
CN Benzamide, N,N-diethyl-4-[[3-[(methylamino)carbonyl]phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]-, (+)-, trifluoroacetate (5:8) (9CI) (CA INDEX NAME)

CM 1

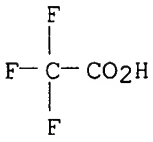
CRN 691358-64-2
CMF C31 H38 N4 O2

Rotation (+).



CM 2

CRN 76-05-1
CMF C2 H F3 O2



=> d ibib abs hitstr l12 1-10

L12 ANSWER 1 OF 10 USPATFULL on STN
ACCESSION NUMBER: 2006:34795 USPATFULL
TITLE: Diarylmethyl piperazine derivatives, preparations thereof and uses thereof
INVENTOR(S): Brown, William, Saint Laurent, CANADA
Griffin, Andrew, Saint Laurent, CANADA
Hudzik, Thomas, Wilmington, DE, UNITED STATES
Maciag, Carla, Wilmington, DE, UNITED STATES
Smagin, Gennady, Wilmington, DE, UNITED STATES
Walpole, Christopher, Saint Laurent, CANADA
PATENT ASSIGNEE(S): AstraZeneca AB, Sodertalje, SWEDEN (non-U.S. corporation)

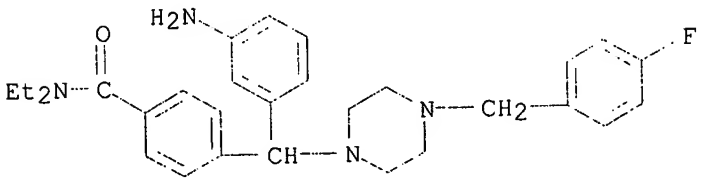
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006030569	A1	20060209
APPLICATION INFO.:	US 2005-243623	A1	20051005 (11)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 2005-SE1186, filed on 27 Jul 2005, UNKNOWN

	NUMBER	DATE	
PRIORITY INFORMATION:	SE 2004-1968	20040802	<--

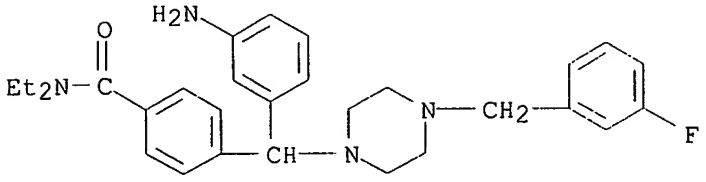
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ASTRA ZENECA PHARMACEUTICALS LP, GLOBAL INTELLECTUAL PROPERTY, 1800 CONCORD PIKE, WILMINGTON, DE, 19850-5437, US
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1
LINE COUNT: 1196
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds of general formula: ##STR1## as well as salts, enantiomers thereof and pharmaceutical compositions including the compounds are prepared. They are useful in therapy, in particular in the management of pain, depression and anxiety.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **875647-78-2P 875647-79-3P 875647-80-6P 875647-81-7P 875647-82-8P 875647-83-9P 875647-84-0P**
(claimed compound; preparation of benzyldiarylmethylpiperazines as δ-opioid agonists)
RN 875647-78-2 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-[(4-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

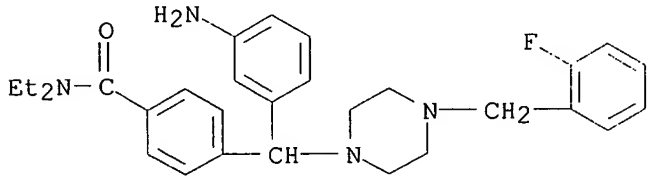


RN 875647-79-3 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-[(3-fluorophenyl)methyl]-1-

piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

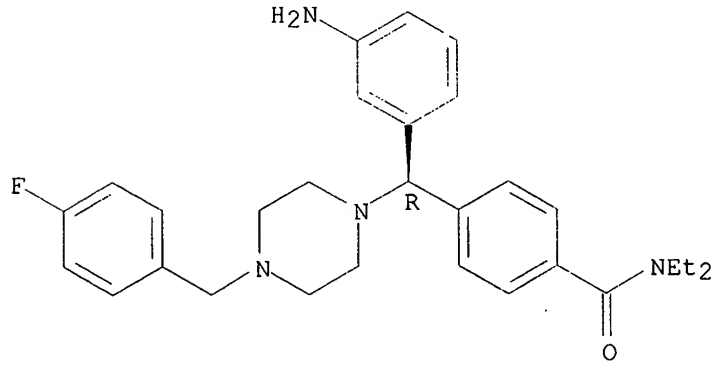


RN 875647-80-6 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-[(2-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



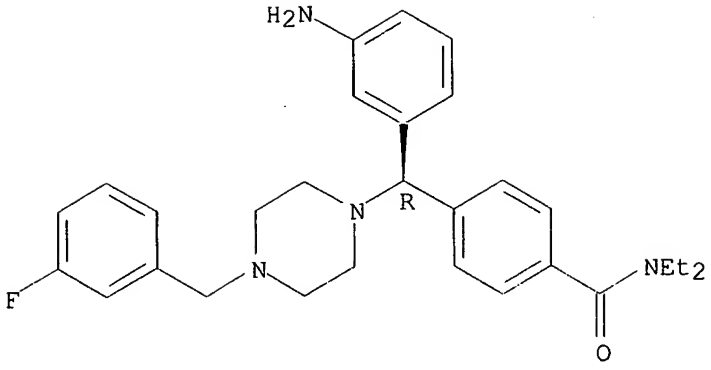
RN 875647-81-7 USPATFULL
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-[(4-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



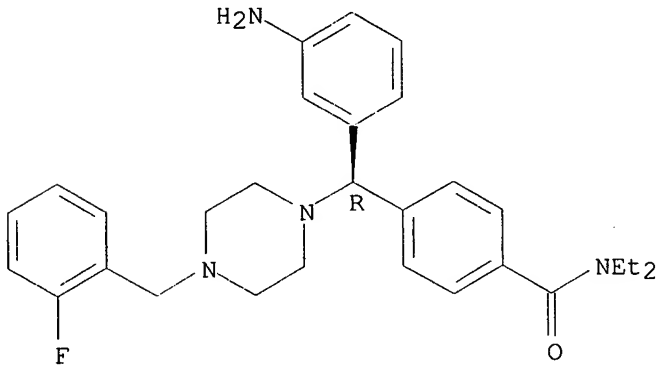
RN 875647-82-8 USPATFULL
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-[(3-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



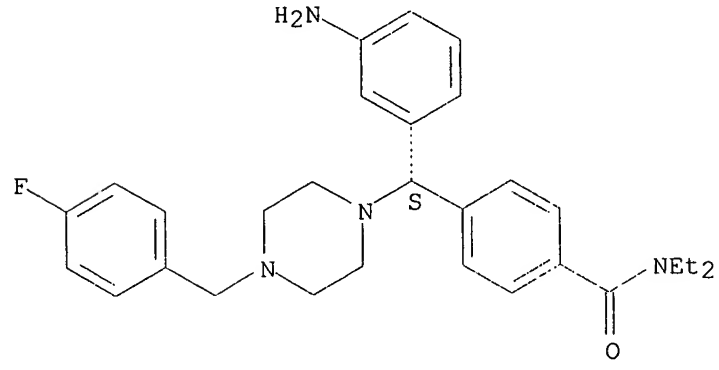
RN 875647-83-9 USPATFULL
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-[(2-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 875647-84-0 USPATFULL
CN Benzamide, 4-[(S)-(3-aminophenyl)[4-[(4-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



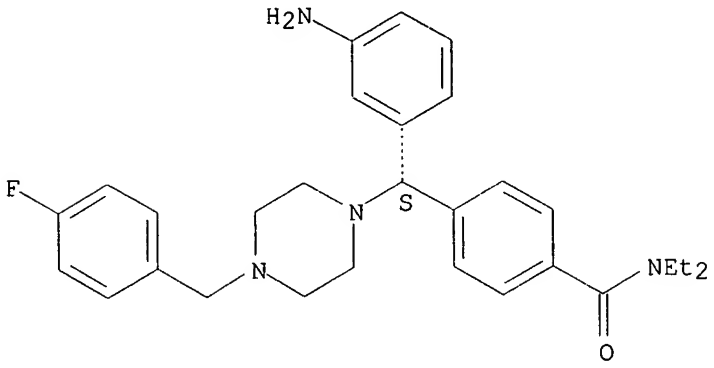
IT **875647-86-2P 875647-87-3P 875647-88-4P 875647-89-5P**

(preparation of benzyldiarylmethylpiperazines as δ-opioid agonists)

RN 875647-86-2 USPATFULL

CN Benzamide, 4-[(S)-(3-aminophenyl)[4-[(4-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (10:41) (9CI) (CA INDEX NAME)

Absolute stereochemistry.



●41/10 HCl

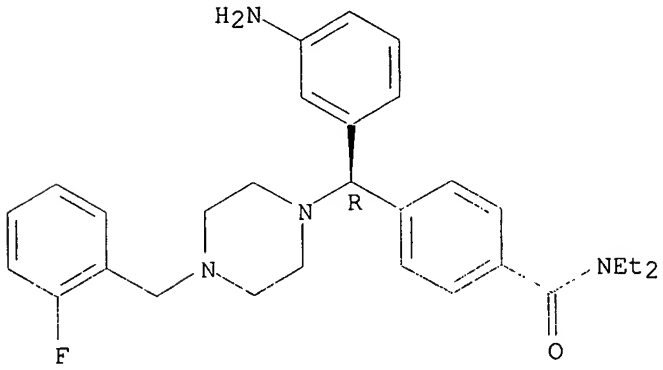
RN 875647-87-3 USPATFULL

CN Benzamide, 4-[(R)-(3-aminophenyl)[4-[(2-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl-, trifluoroacetate (5:14) (9CI) (CA INDEX NAME)

CM 1

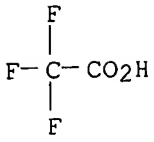
CRN 875647-83-9
CMF C29 H35 F N4 O

Absolute stereochemistry.



CM 2

CRN 76-05-1
CMF C2 H F3 O2

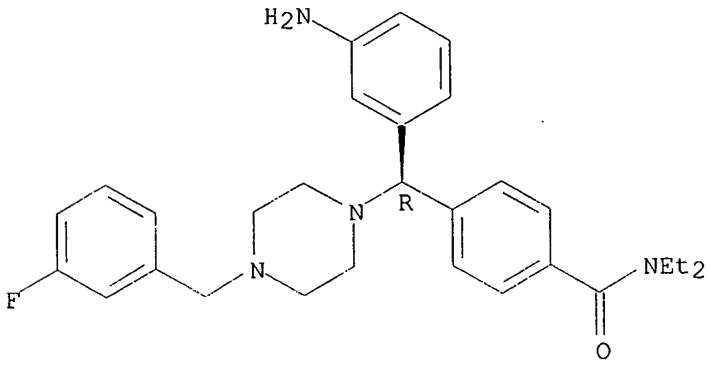


RN 875647-88-4 USPATFULL
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-[(3-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl-, trifluoroacetate (10:27) (9CI) (CA INDEX NAME)

CM 1

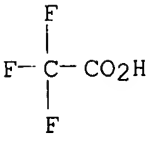
CRN 875647-82-8
CMF C29 H35 F N4 O

Absolute stereochemistry.



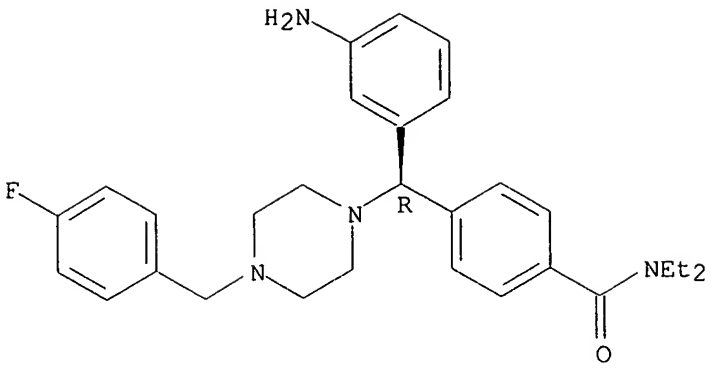
CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 875647-89-5 USPATFULL
CN Benzamide, 4-[(R)-(3-aminophenyl)[4-[(4-fluorophenyl)methyl]-1-piperazinyl]methyl]-N,N-diethyl-, hydrochloride (10:47) (9CI) (CA INDEX NAME)

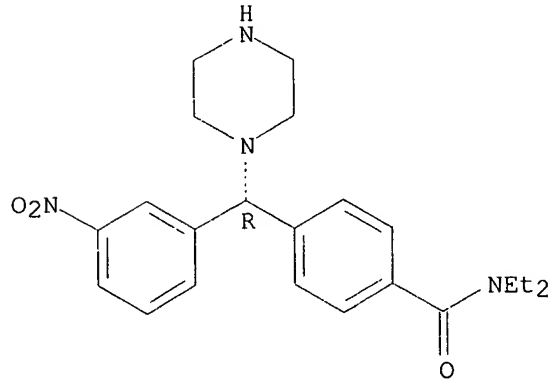
Absolute stereochemistry.



●47/10 HCl

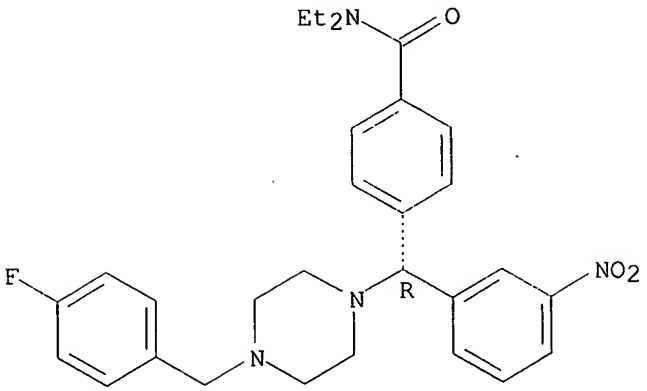
IT **691877-63-1P 875647-85-1P**
(preparation of benzyldiarylmethylpiperazines as δ-opioid agonists)
RN 691877-63-1 USPATFULL
CN Benzamide, N,N-diethyl-4-[(R)-(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 875647-85-1 USPATFULL
CN Benzamide, N,N-diethyl-4-[(R)-[4-[(4-fluorophenyl)methyl]-1-piperazinyl](3-nitrophenyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L12 ANSWER 2 OF 10 USPATFULL on STN

ACCESSION NUMBER: 2005:292605 USPATFULL

TITLE: Compositions and methods for reducing respiratory depression and attendant side effects of mu opioid compounds

INVENTOR(S): Chang, Kwen-Jen, Chapel Hill, NC, UNITED STATES
McNutt, Robert W. JR., Durham, NC, UNITED STATES
Pettit, Hugh O., Cary, NC, UNITED STATES
Bishop, Michael J., Durham, NC, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005255151	A1	20051117
APPLICATION INFO.:	US 2005-184762	A1	20050719 (11)

RELATED APPLN. INFO.: Division of Ser. No. US 2001-974004, filed on 9 Oct 2001, GRANTED, Pat. No. US 6919350 Division of Ser. No. US 1999-352308, filed on 12 Jul 1999, GRANTED, Pat. No. US 6300332 Division of Ser. No. US 1997-887312, filed on 3 Jul 1997, GRANTED, Pat. No. US 5985880 Continuation-in-part of Ser. No. US 1996-658726, filed on 5 Jun 1996, GRANTED, Pat. No. US 5807858

	NUMBER	DATE	
PRIORITY INFORMATION:	WO 1993-GB216	19930202	<--
	GB 1992-2238	19920203	<--

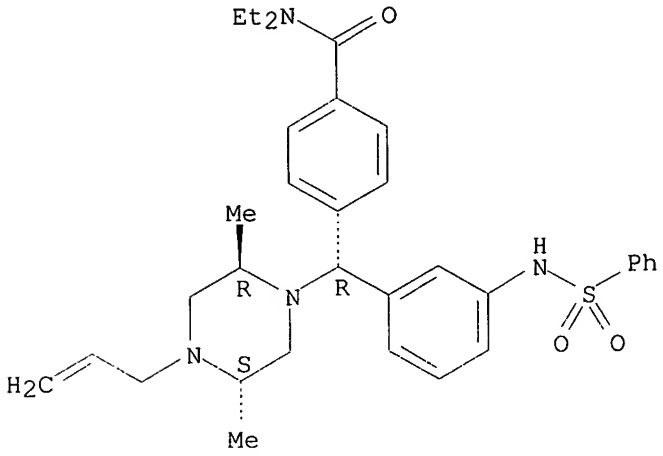
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: INTELLECTUAL PROPERTY / TECHNOLOGY LAW, PO BOX 14329, RESEARCH TRIANGLE PARK, NC, 27709, US
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 2121
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of reducing, treating or preventing drug-mediated respiratory depression, muscle rigidity, or nausea/vomiting in an animal, incident to the administration to said animal of a mixed delta/mu opioid agonist or a respiratory depression-mediating drug, comprising administering to the animal receiving said drug an effective amount of a delta receptor agonist compound. Preferred examples of such delta receptor agonist compound include diarylmethyl piperazine compounds and diarylmethyl

piperidine compounds, and pharmaceutical compositions thereof, having utility in medical therapy for reducing respiratory depression associated with certain analgesics, such as mu opiates.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **155766-20-4P 155766-21-5P 155773-61-8P**
155806-56-7P 155893-51-9P
(preparation and analgesic activity of)
RN 155766-20-4 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, dihydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

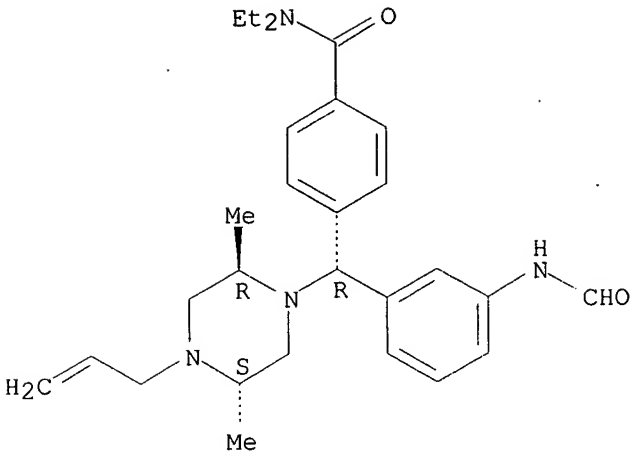
Relative stereochemistry.



●2 HCl

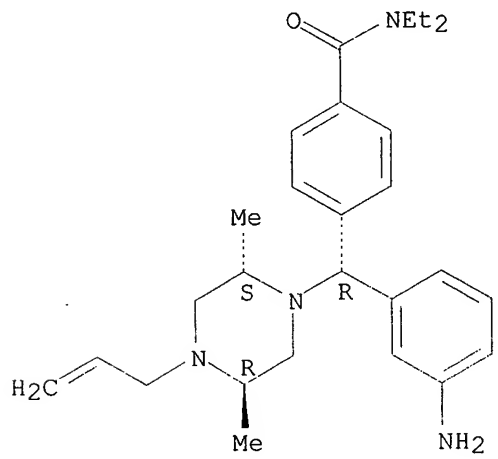
RN 155766-21-5 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155773-61-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

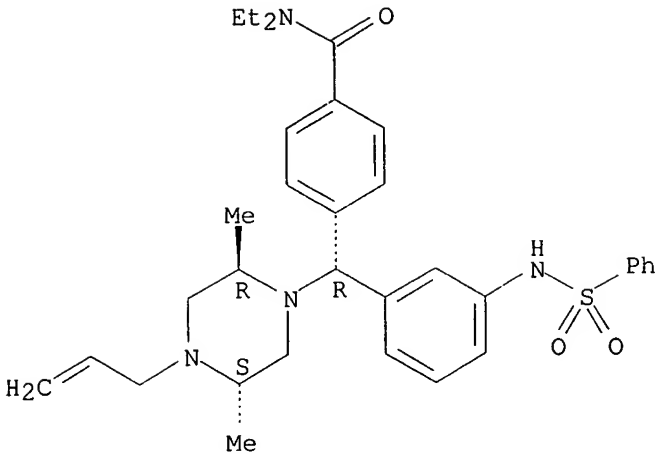
Relative stereochemistry.



● HCl

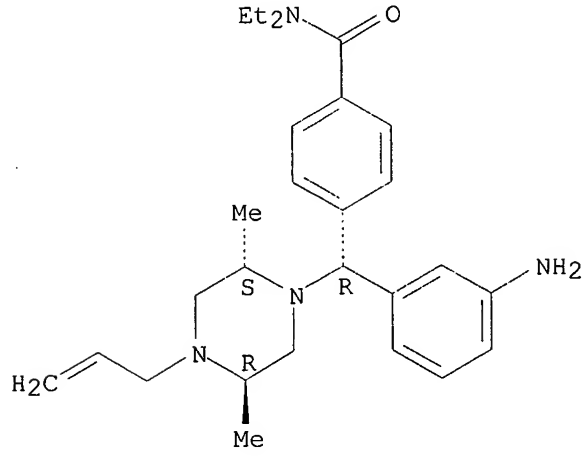
RN 155806-56-7 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



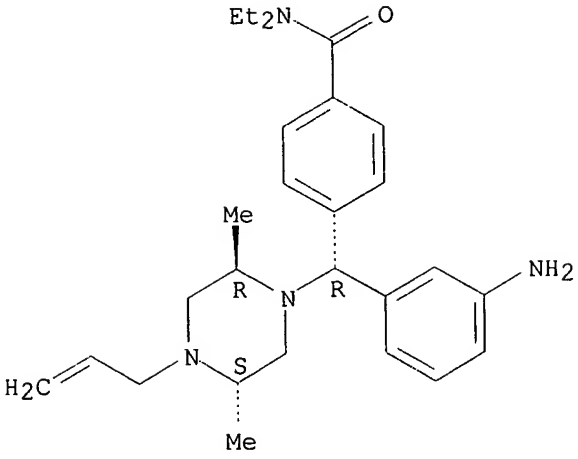
RN 155893-51-9 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



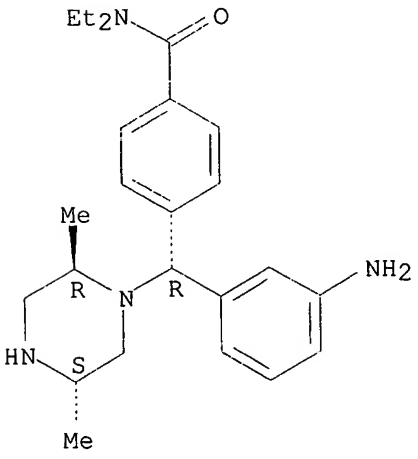
IT **155773-60-7P**
(preparation and analgesic activity of, reaction of)
RN 155773-60-7 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



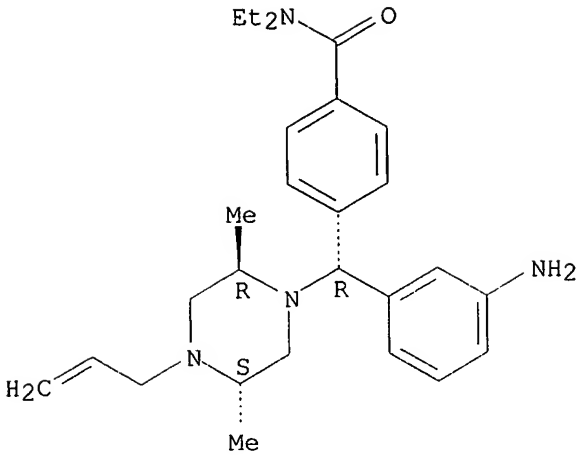
IT **155893-49-5P 155893-50-8P**
(preparation and reaction of, in preparation of analgesics)
RN 155893-49-5 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)(2,5-dimethyl-1-piperazinyl)methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-50-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

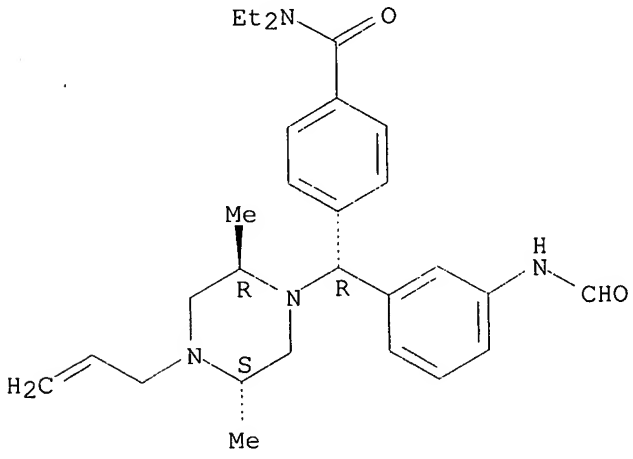
Relative stereochemistry.



● HCl

IT **155836-61-6**
(reaction of, in preparation of analgesics)
RN 155836-61-6 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

L12 ANSWER 3 OF 10 USPATFULL on STN
ACCESSION NUMBER: 2004:190753 USPATFULL
TITLE: 4(Phenyl-piperazinyl-methyl) benzamide derivatives and their use for the treatment of pain anxiety or gastrointestinal disorders

INVENTOR(S): Brown, William, Montreal, CANADA
Walpole, Christopher, Montreal, CANADA
Plobeck, Niklas, Sodertalje, SWEDEN

	NUMBER	KIND	DATE		
PATENT INFORMATION:	US 2004147526	A1	20040729		<--
APPLICATION INFO.:	US 2003-477642	A1	20031113	(10)	
	WO 2002-SE956		20020516		

	NUMBER	DATE	
PRIORITY INFORMATION:	SE 2001-1772	20010518	<--
	SE 2001-3820	20011115	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ASTRA ZENECA PHARMACEUTICALS LP, GLOBAL INTELLECTUAL PROPERTY, 1800 CONCORD PIKE, WILMINGTON, DE, 19850-5437
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1
LINE COUNT: 871
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compounds of general formula I R.sup.1 is selected from any one of phenyl, pyridinyl, thienyl, furanyl, imidazolyl, pyrrolyl, triazolyl, thiazolyl, and pyridine N-oxide; R.sup.2 is independently selected from ethyl and isopropyl; R.sup.3 is independently selected from hydrogen and fluoro; R.sup.4 is independently selected from --OH, --NH.sub.2 and --NHSO.sub.2R.sup.5; and R.sup.5 is independently selected from hydrogen, --CF.sub.3 and C.sub.1-C.sub.6 alkyl, or salts thereof or separate enantiomers and salts thereof; where each R.sup.1 heteroaromatic ring may optionally and independently be further substituted by 1, 2 or 3 substituents selected from straight and branched C.sub.1-C.sub.6 alkyl, NO.sub.2, CF.sub.3, C.sub.1-C.sub.6 alkoxy, chloro, fluoro, bromo, and iodo. The substitutions on the heteroaromatic ring may take place in any position on said ring systems; are disclosed and claimed in the present application, as well as separate enantiomers of the compounds and salts and pharmaceutical compositions comprising the novel compounds and their use in therapy, in particular in the management of pain, anxiety and functional gastrointestinal disorders.

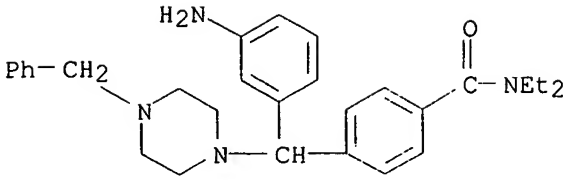
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **477191-61-0P**
(preparation of 4-(phenyl-piperazinyl-methyl)-benzamides as δ opioid receptor agonists for treating pain, anxiety or gastrointestinal disorders)

RN 477191-61-0 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(phenylmethyl)-1-piperazinyl]methyl]-N,N-diethyl-, tris(trifluoroacetate) (9CI) (CA INDEX NAME)

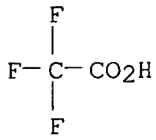
CM 1

CRN 477191-60-9
CMF C29 H36 N4 O



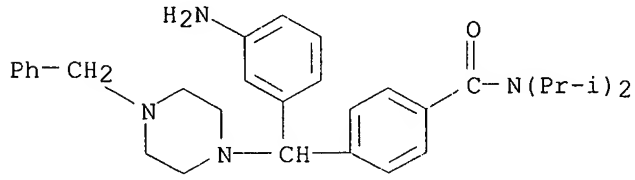
CM 2

CRN 76-05-1
CMF C2 H F3 O2



IT **477191-49-4P 477191-50-7P 477191-51-8P**
477191-52-9P 477191-53-0P 477191-54-1P
477191-55-2P 477191-56-3P 477191-57-4P
477191-58-5P 477191-59-6P 477191-60-9P
477191-62-1P 477191-63-2P 477191-64-3P
477191-65-4P
(preparation of 4-(phenyl-piperazinyl-methyl)-benzamides as δ opioid receptor agonists for treating pain, anxiety or gastrointestinal disorders)

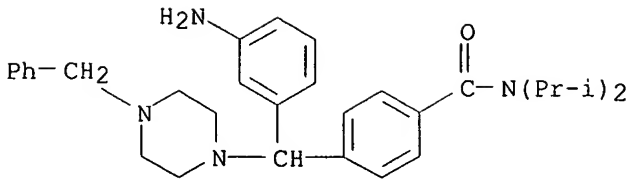
RN 477191-49-4 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(phenylmethyl)-1-piperazinyl]methyl]-N,N-bis(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 477191-50-7 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(phenylmethyl)-1-piperazinyl]methyl]-N,N-bis(1-methylethyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

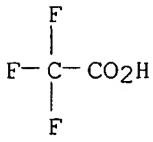
CM 1

CRN 477191-49-4
CMF C31 H40 N4 O

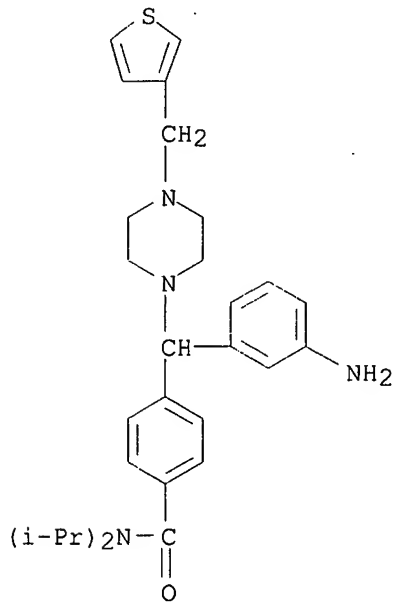


CM 2

CRN 76-05-1
CMF C2 H F3 O2



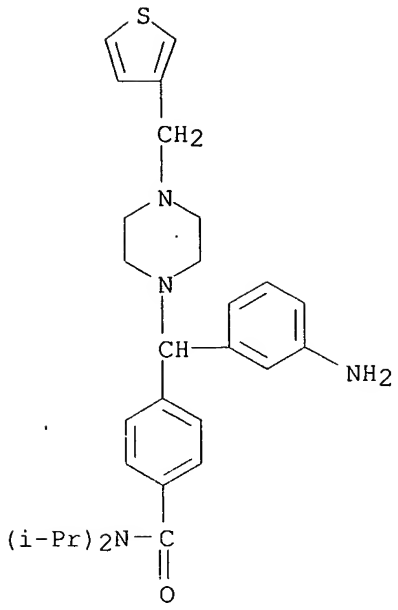
RN 477191-51-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(3-thienylmethyl)-1-piperazinyl]methyl]-N,N-bis(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 477191-52-9 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(3-thienylmethyl)-1-piperazinyl]methyl]-N,N-bis(1-methylethyl)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

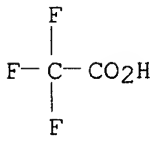
CM 1

CRN 477191-51-8
CMF C29 H38 N4 O S

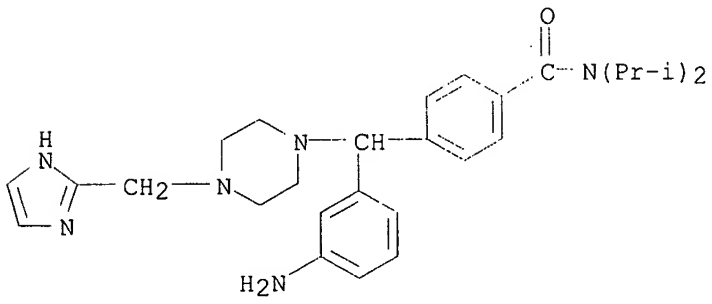


CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 477191-53-0 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(1H-imidazol-2-ylmethyl)-1-piperazinyl]methyl]-N,N-bis(1-methylethyl)- (9CI) (CA INDEX NAME)

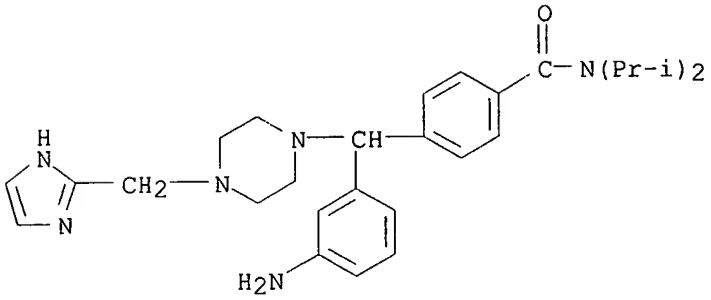


RN 477191-54-1 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(1H-imidazol-2-ylmethyl)-1-

piperazinyl]methyl]-N,N-bis(1-methylethyl)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

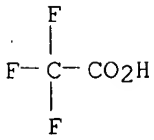
CM 1

CRN 477191-53-0
CMF C28 H38 N6 O

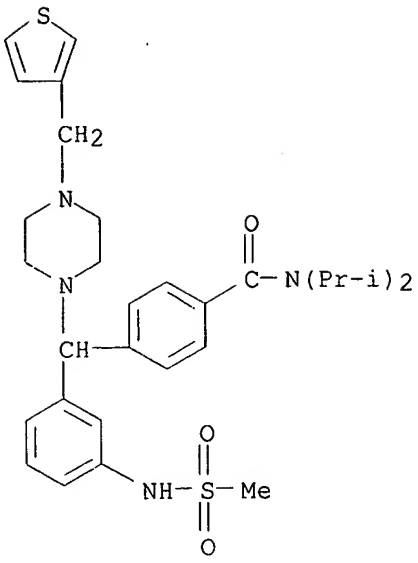


CM 2

CRN 76-05-1
CMF C2 H F3 O2



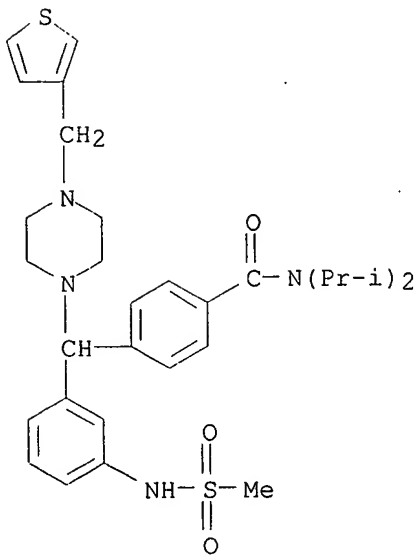
RN 477191-55-2 USPATFULL
CN Benzamide, N,N-bis(1-methylethyl)-4-[[3-[(methylsulfonyl)amino]phenyl][4-(3-thienylmethyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



RN 477191-56-3 USPATFULL
CN Benzamide, N,N-bis(1-methylethyl)-4-[[3-[(methylsulfonyl)amino]phenyl][4-(3-thienylmethyl)-1-piperazinyl]methyl]-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

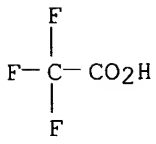
CRN 477191-55-2
CMF C30 H40 N4 O3 S2



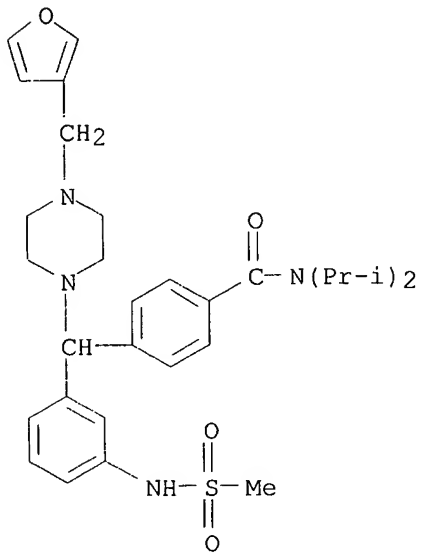
CM 2

CRN 76-05-1

CMF C2 H F3 O2

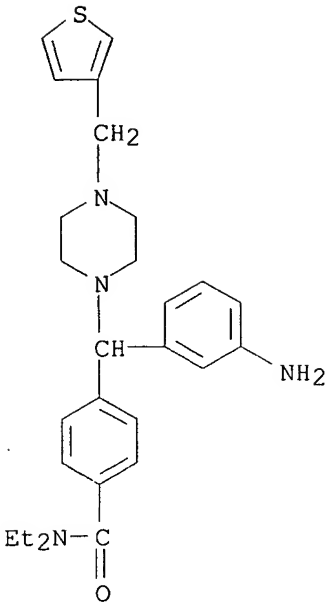


RN 477191-57-4 USPATFULL
CN Benzamide, 4-[[4-(3-furanylmethyl)-1-piperazinyl][3-[(methylsulfonyl)amino]phenyl]methyl]-N,N-bis(1-methylethyl)-, hydrochloride (5:14) (9CI) (CA INDEX NAME)



●14/5 HCl

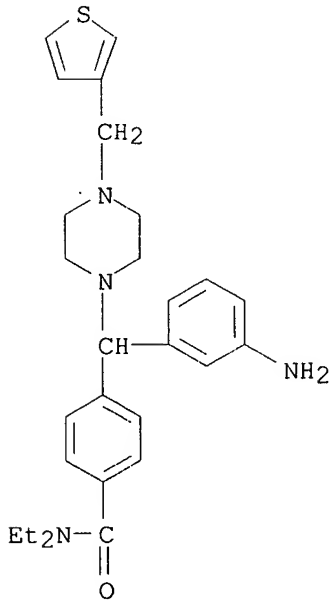
RN 477191-58-5 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(3-thienylmethyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



RN 477191-59-6 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(3-thienylmethyl)-1-piperazinyl]methyl]-N,N-diethyl-, tris(trifluoroacetate) (9CI) (CA INDEX NAME)

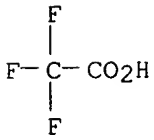
CM 1

CRN 477191-58-5
CMF C27 H34 N4 O S

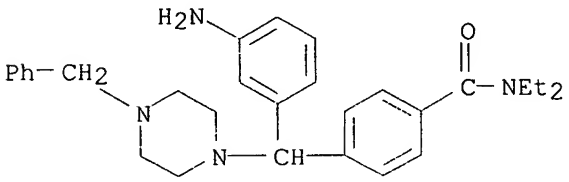


CM 2

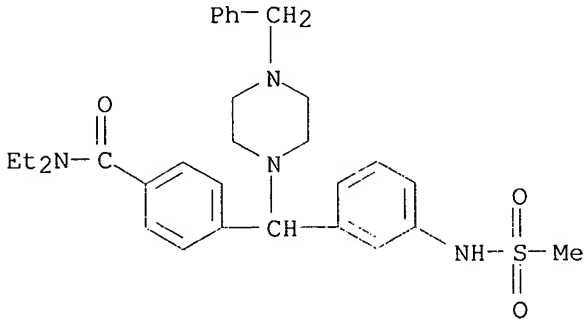
CRN 76-05-1
CMF C2 H F3 O2



RN 477191-60-9 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[4-(phenylmethyl)-1-piperazinyl]methyl]-N,N-diethyl- (9CI) (CA INDEX NAME)



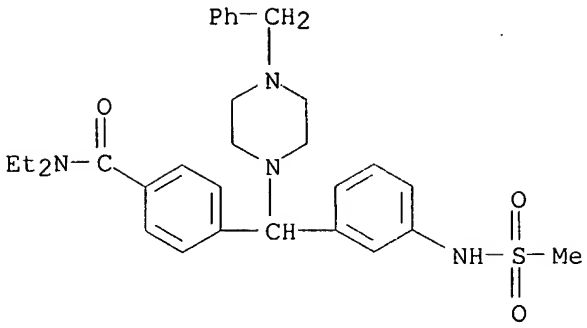
RN 477191-62-1 USPATFULL
CN Benzamide, N,N-diethyl-4-[[3-[(methylsulfonyl)amino]phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



RN 477191-63-2 USPATFULL
CN Benzamide, N,N-diethyl-4-[[3-[(methylsulfonyl)amino]phenyl][4-(phenylmethyl)-1-piperazinyl]methyl]-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

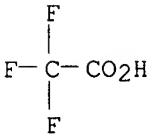
CM 1

CRN 477191-62-1
CMF C30 H38 N4 O3 S

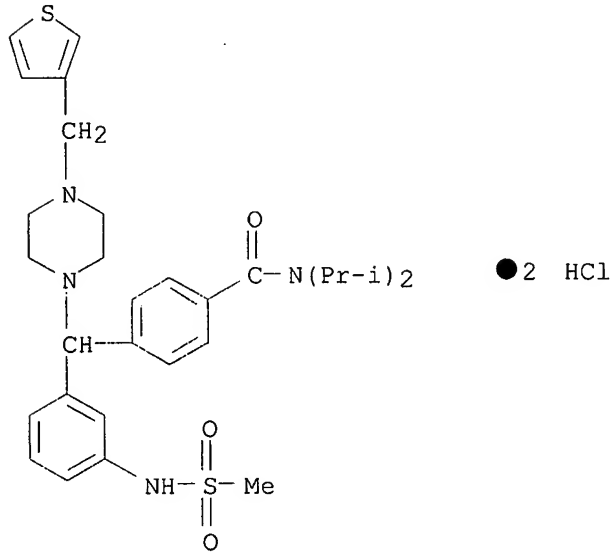


CM 2

CRN 76-05-1
CMF C2 H F3 O2

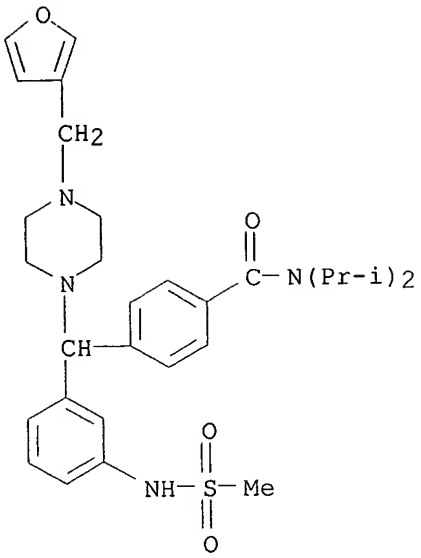


RN 477191-64-3 USPATFULL
CN Benzamide, N,N-bis(1-methylethyl)-4-[[3-[(methylsulfonyl)amino]phenyl][4-(3-thienylmethyl)-1-piperazinyl]methyl]-, dihydrochloride (9CI) (CA INDEX NAME)

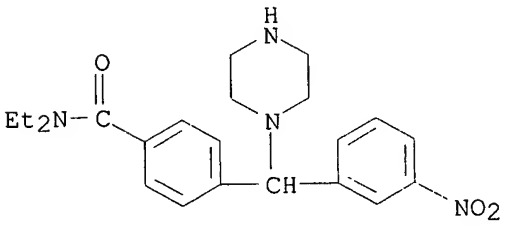


RN 477191-65-4 USPATFULL
CN Benzamide, 4-[[4-(3-furanylmethyl)-1-piperazinyl][3-[(methylsulfonyl)amino]phenyl]methyl]-N,N-bis(1-methylethyl)- (9CI) (CA

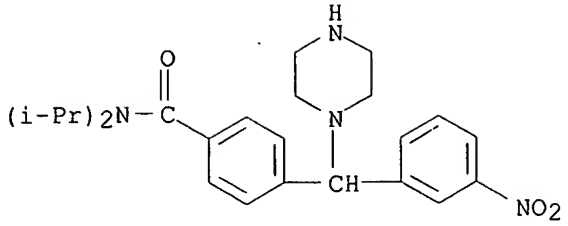
INDEX NAME)



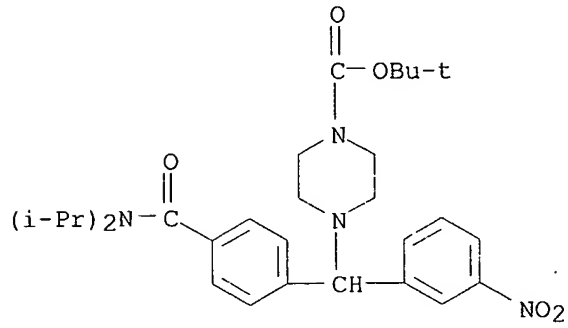
IT **477191-80-3**
(preparation of 4-(phenyl-piperazinyl-methyl)-benzamides as δ opioid receptor agonists for treating pain, anxiety or gastrointestinal disorders)
RN 477191-80-3 USPATFULL
CN Benzamide, N,N-diethyl-4-[(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)



IT **477191-72-3P 477191-73-4P 477191-74-5P**
477191-75-6P 477191-76-7P 477191-77-8P
477191-78-9P
(preparation of 4-(phenyl-piperazinyl-methyl)-benzamides as δ opioid receptor agonists for treating pain, anxiety or gastrointestinal disorders)
RN 477191-72-3 USPATFULL
CN Benzamide, N,N-bis(1-methylethyl)-4-[(3-nitrophenyl)-1-piperazinylmethyl]- (9CI) (CA INDEX NAME)



RN 477191-73-4 USPATFULL
CN 1-Piperazinecarboxylic acid, 4-[[4-[[bis(1-methylethyl)amino]carbonyl]phenyl](3-nitrophenyl)methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 477191-74-5 USPATFULL
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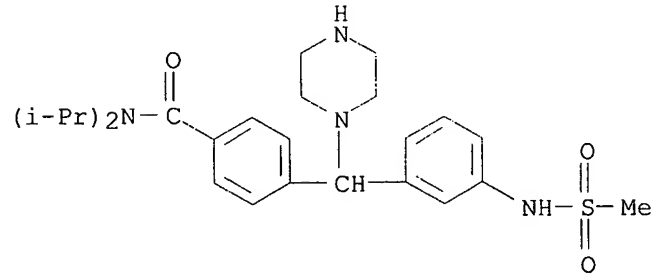
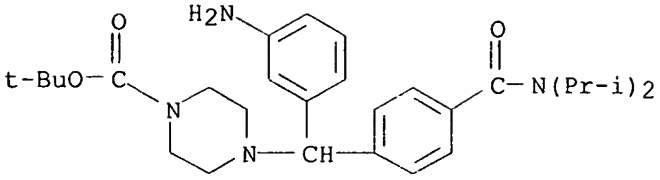
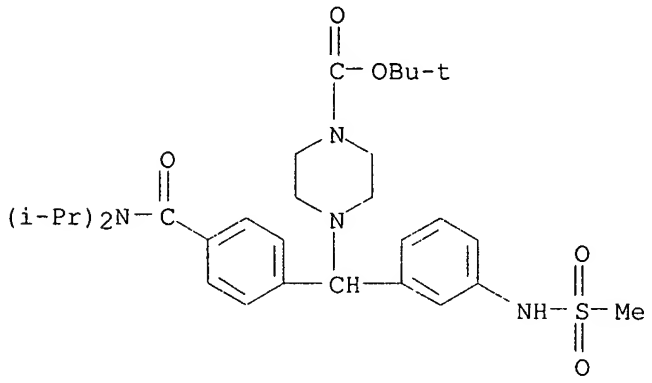


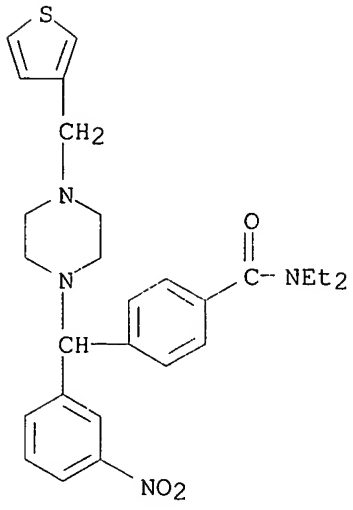
RN 477191-75-6 USPATFULL
CN 1-Piperazinecarboxylic acid, 4-[(3-aminophenyl)[4-[[bis(1-methylethyl)amino]carbonyl]phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



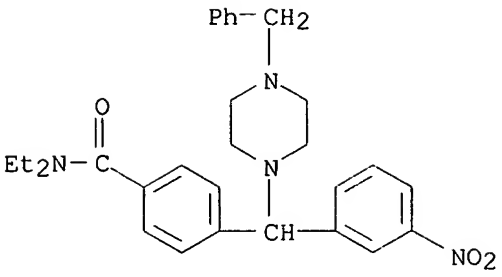
RN 477191-76-7 USPATFULL
CN 1-Piperazinecarboxylic acid, 4-[[4-[[bis(1-methylethyl)amino]carbonyl]phenyl][3-[(methylsulfonyl)amino]phenyl]methyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 477191-77-8 USPATFULL
CN Benzamide, N,N-diethyl-4-[(3-nitrophenyl)[4-(3-thienylmethyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



RN 477191-78-9 USPATFULL
CN Benzamide, N,N-diethyl-4-[(3-nitrophenyl)[4-(phenylmethyl)-1-piperazinyl]methyl]- (9CI) (CA INDEX NAME)



L12 ANSWER 4 OF 10 USPATFULL on STN

ACCESSION NUMBER:	2002:206661 USPATFULL
TITLE:	Compositions and Methods for Reducing Respiratory Depression and Attendant SIde Effects of Mu Opioid Compounds
INVENTOR(S):	Chang , Kwen-Jen , Mr., 104 Sierra Drive, Chapel Hill, NC, UNITED STATES 27514 McNutt , Robert W. , Jr. , Mr., 700 Morreene Road, APt. B-9, Durham, NC, UNITED STATES 27705 Pettit , Hugh O. , Mr., 106 Wyatts Pond Lane, Cary, NC, UNITED STATES 27513 Bishop , Michael J. , Mr., 235 Lochridge Drive, Durham, NC, UNITED STATES 27713
PATENT ASSIGNEE(S):	Ardent Pharmaceuticals, Inc., RTP, 27709-2278, UNITED STATES, NC (U.S. individual)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002111359	A1	20020815	<--
	US 6919350	B2	20050719	
APPLICATION INFO.:	US 2001-974004	A1	20011009 (9)	

RELATED APPLN. INFO.:	Division of Ser. No. US 1999-9352308, filed on 12 Jul 1999, GRANTED, Pat. No. US 6300332 Division of Ser. No. US 1997-8887312, filed on 3 Jul 1997, GRANTED, Pat. No. US 5985880 Continuation-in-part of Ser. No. US 1996-8658726, filed on 5 Jun 1996, GRANTED, Pat. No. US 5807858
DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	Steven J. Hultquist, Marianne Fuierer, 6320 Quadrangle, Suite 110, Chapel Hill, NC, 27517
NUMBER OF CLAIMS:	29
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	2 Drawing Page(s)
LINE COUNT:	2405

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Abstract of Disclosure

A method of reducing, treating or preventing drug-mediated respiratory depression, muscle rigidity, or nausea/vomiting in an animal, incident to the administration to said animal of a mixed delta/mu opioid agonist or a respiratory depression-mediating drug, comprising administering to the animal receiving said drug an effective amount of a delta receptor agonist compound. Preferred examples of such delta receptor agonist compound include diarylmethyl piperazine compounds and diarylmethyl piperidine compounds, and pharmaceutical compositions thereof, having

utility in medical therapy for reducing respiratory depression associated with certain analgesics, such as mu opiates.

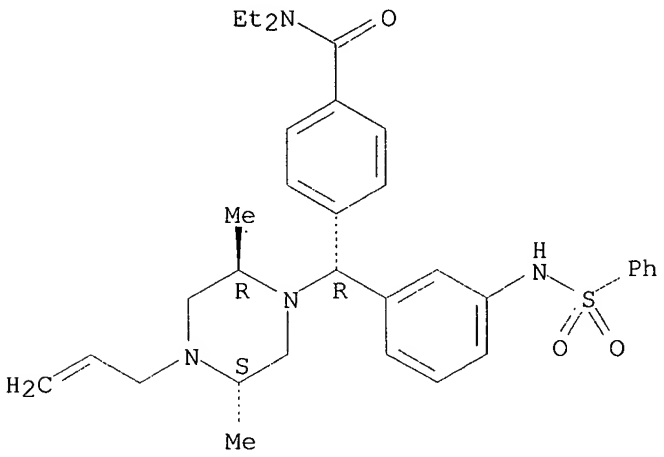
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **155766-20-4P 155766-21-5P 155773-61-8P 155806-56-7P 155893-51-9P**
(preparation and analgesic activity of)

RN 155766-20-4 USPATFULL

CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, dihydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

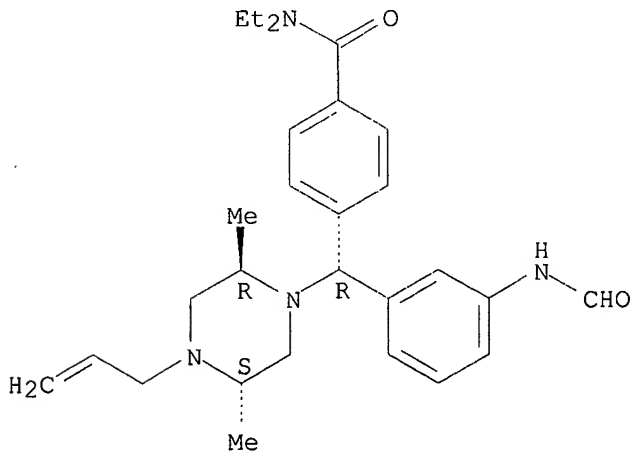


●2 HCl

RN 155766-21-5 USPATFULL

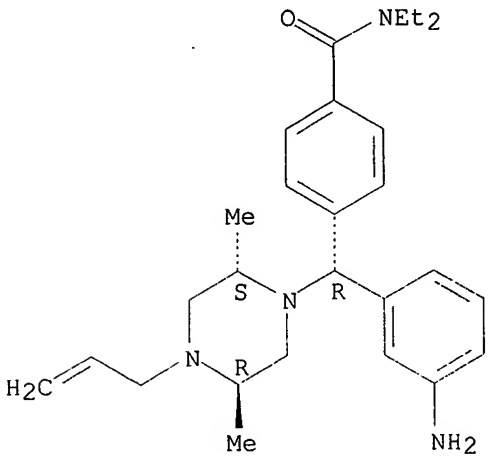
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155773-61-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

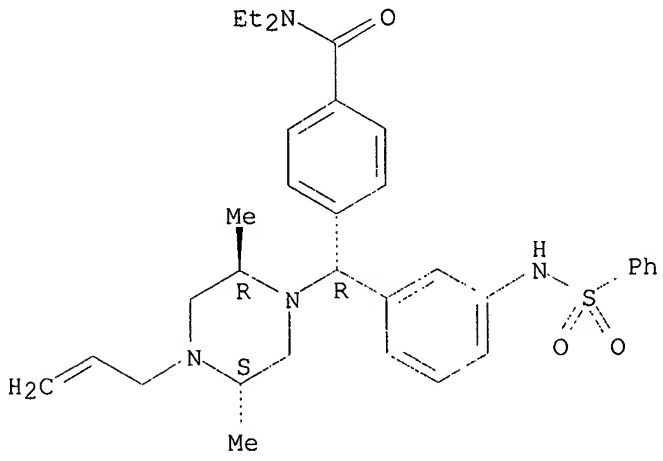
Relative stereochemistry.



● HCl

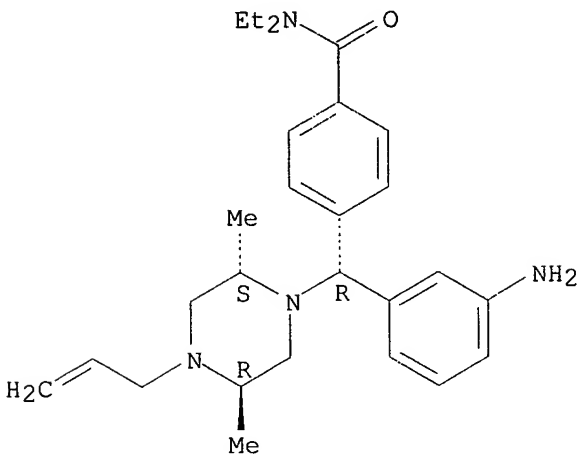
RN 155806-56-7 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



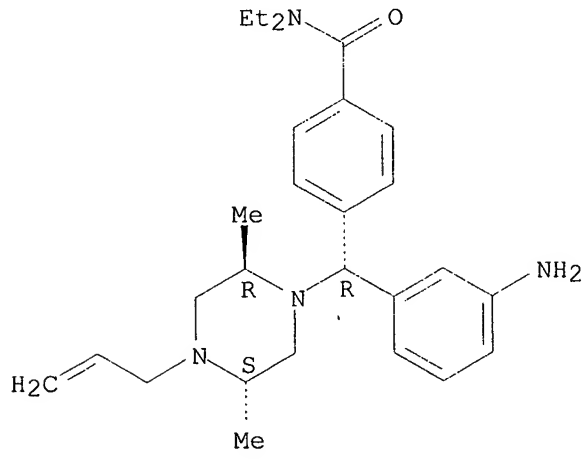
RN 155893-51-9 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



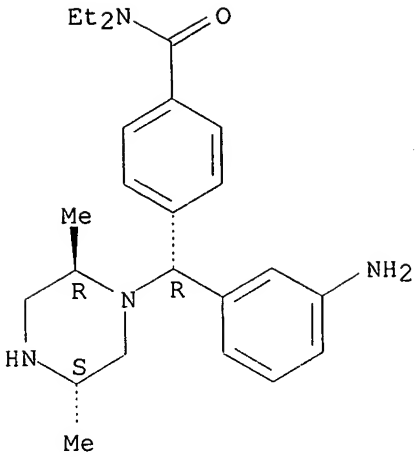
IT **155773-60-7P**
(preparation and analgesic activity of, reaction of)
RN 155773-60-7 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



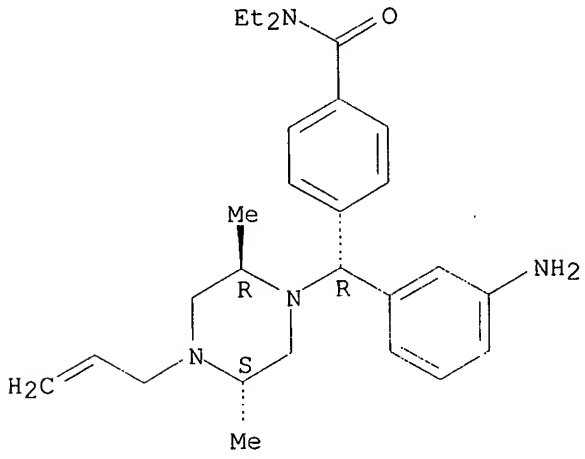
IT **155893-49-5P 155893-50-8P**
(preparation and reaction of, in preparation of analgesics)
RN 155893-49-5 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)(2,5-dimethyl-1-piperazinyl)methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-50-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

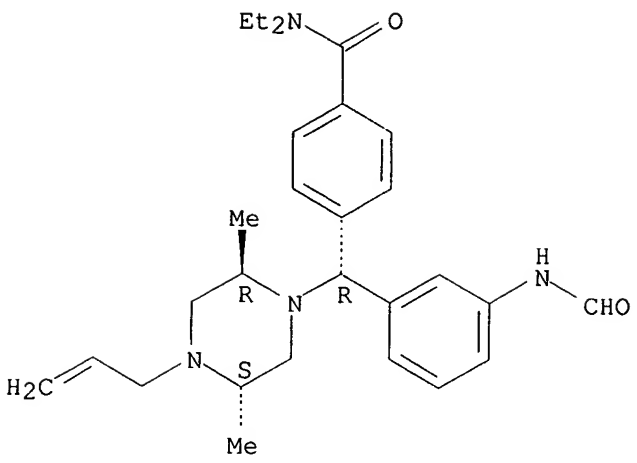
Relative stereochemistry.



● HCl

IT **155836-61-6**
(reaction of, in preparation of analgesics)
RN 155836-61-6 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

L12 ANSWER 5 OF 10 USPATFULL on STN

ACCESSION NUMBER:	2001:173586 USPATFULL
TITLE:	Methods for reducing respiratory depression and attendant side effects of mu opioid compounds
INVENTOR(S):	Chang, Kwen-Jen, Chapel Hill, NC, United States McNutt, Jr., Robert W., Durham, NC, United States Pettit, Hugh O., Cary, NC, United States Bishop, Michael J., Durham, NC, United States
PATENT ASSIGNEE(S):	Delta Pharmaceuticals, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6300332	B1	20011009	<--
APPLICATION INFO.:	US 1999-352308		19990712 (9)	

RELATED APPLN. INFO.: Division of Ser. No. US 1997-887312, filed on 3 Jul 1997, now patented, Pat. No. US 5985880, issued on 16 Nov 1999 Continuation-in-part of Ser. No. US 1996-658726, filed on 5 Jun 1996, now patented, Pat. No. US 5807858, issued on 15 Sep 1998

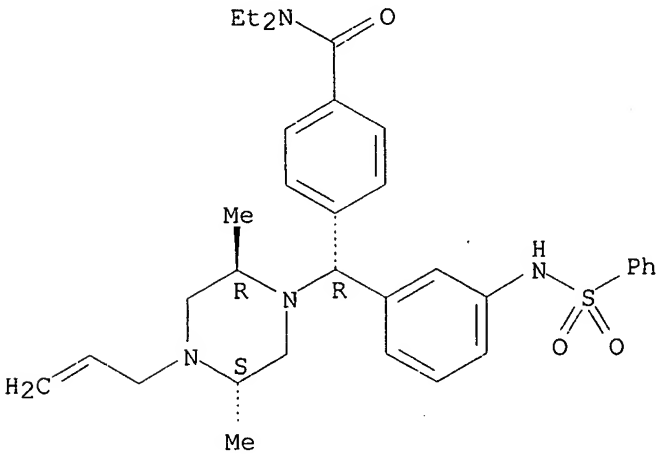
DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
PRIMARY EXAMINER:	Jarvis, William R. A.
LEGAL REPRESENTATIVE:	Hultquist, Steven J.
NUMBER OF CLAIMS:	25
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT:	2505

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of reducing, treating or preventing drug-mediated respiratory depression, muscle rigidity, or nausea/vomiting in an animal, incident to the administration to said animal of a mixed delta/mu opioid agonist or a respiratory depression-mediating drug, comprising administering to the animal receiving said drug an effective amount of a delta receptor agonist compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **155766-20-4P 155766-21-5P 155773-61-8P**
155806-56-7P 155893-51-9P
(preparation and analgesic activity of)
RN 155766-20-4 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, dihydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

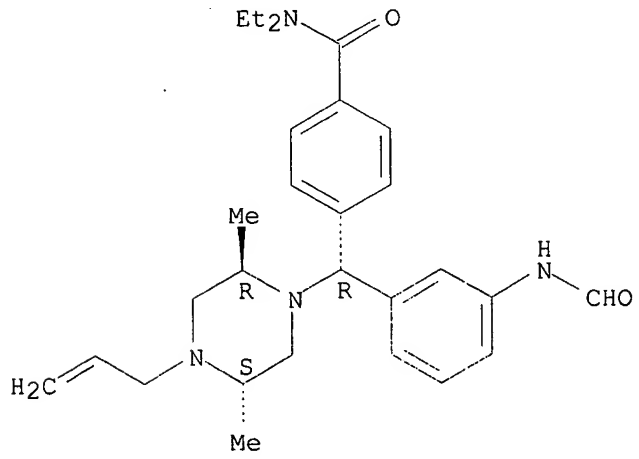
Relative stereochemistry.



●2 HCl

RN 155766-21-5 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

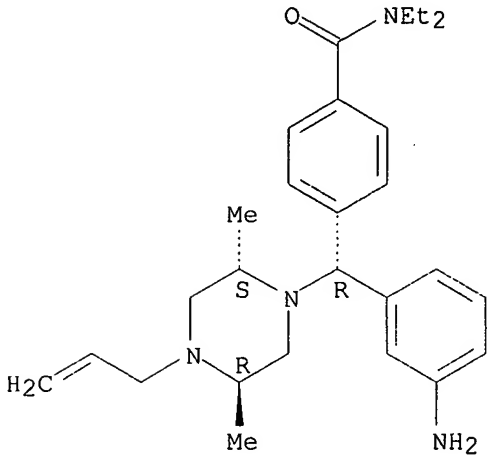
Relative stereochemistry.



RN 155773-61-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-

piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

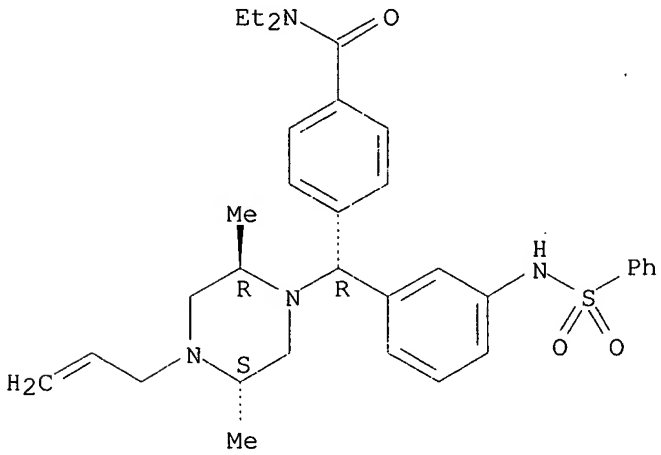
Relative stereochemistry.



● HCl

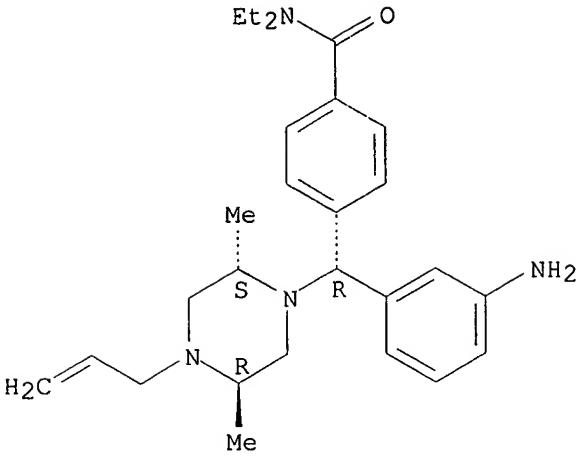
RN 155806-56-7 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



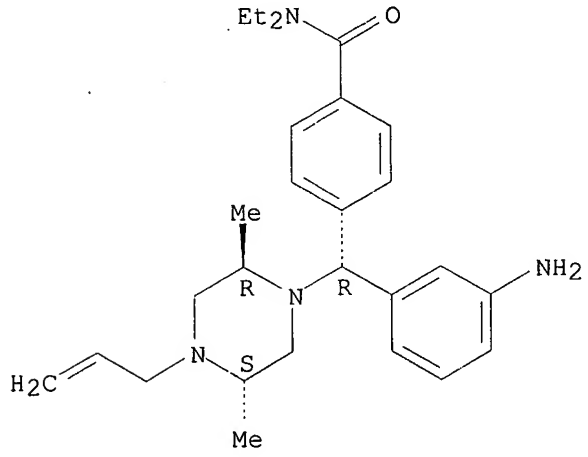
RN 155893-51-9 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



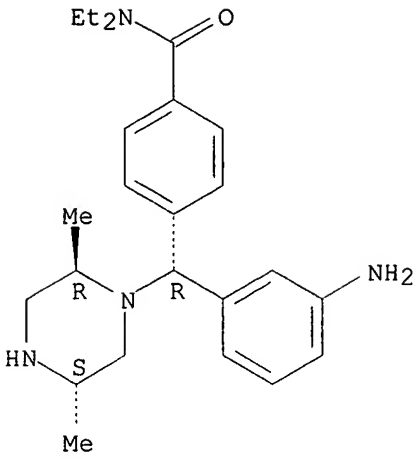
IT **155773-60-7P**
(preparation and analgesic activity of, reaction of)
RN 155773-60-7 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



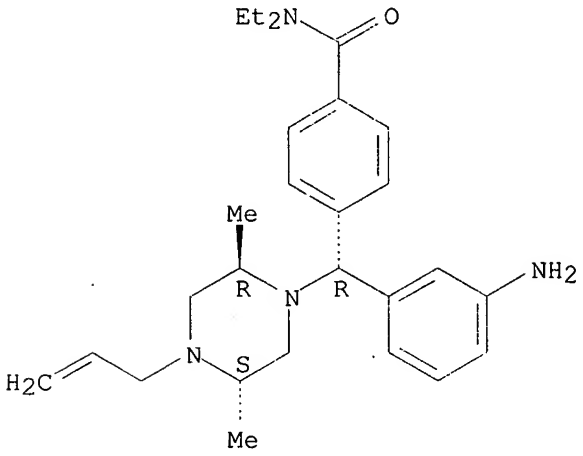
IT **155893-49-5P 155893-50-8P**
(preparation and reaction of, in preparation of analgesics)
RN 155893-49-5 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)(2,5-dimethyl-1-piperazinyl)methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-50-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

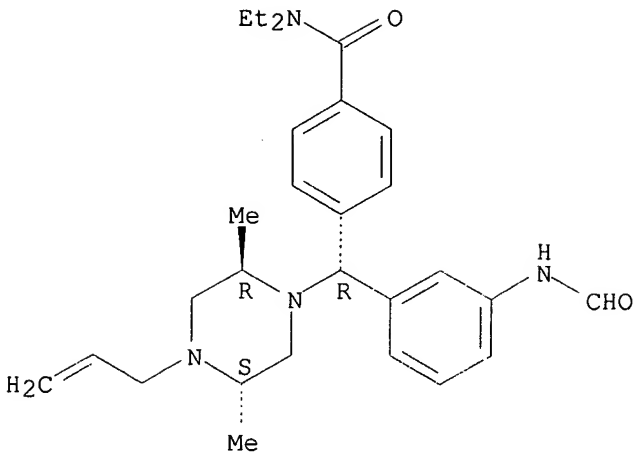
Relative stereochemistry.



● HCl

IT **155836-61-6**
(reaction of, in preparation of analgesics)
RN 155836-61-6 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

L12 ANSWER 6 OF 10 USPATFULL on STN

ACCESSION NUMBER:	1998:162513 USPATFULL
TITLE:	Opioid diarylmethylpiperazines and piperidines
INVENTOR(S):	Chang, Kwen-Jen, Chapel Hill, NC, United States Boswell, Grady Evan, Cary, NC, United States Bubacz, Dulce Garrido, Cary, NC, United States Collins, Mark Allan, Raleigh, NC, United States Davis, Ann Otstot, Raleigh, NC, United States McNutt, Jr., Robert Walton, Durham, NC, United States
PATENT ASSIGNEE(S):	Delta Pharmaceuticals, Inc., Chapel Hill, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5854249		19981229	<--
APPLICATION INFO.:	US 1997-864667		19970528 (8)	
RELATED APPLN. INFO.:	Division of Ser. No. US 1994-284445, filed on 3 Aug 1994, now patented, Pat. No. US 5658908			

	NUMBER	DATE	
PRIORITY INFORMATION:	GB 1992-2238	19920203	<--

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Shah, Mukund J.
ASSISTANT EXAMINER:	Ngo, Tamthom T.
LEGAL REPRESENTATIVE:	Hultquist, Steven J., Barrett, William A.
NUMBER OF CLAIMS:	22
EXEMPLARY CLAIM:	1
LINE COUNT:	5761

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for the treatment or prophylaxis of one or more conditions or disorders selected from the group consisting of physiological pain, diarrhea, urinary incontinence, mental illness, drug and alcohol addiction/overdose, lung edema, depressioysema, apnea, cognitive disorders and gastrointestinal disorders, comprising administration to a

subject in need of such treatment or prophylaxis, of a diarylmethylpiperazine or piperidine opioid compound.

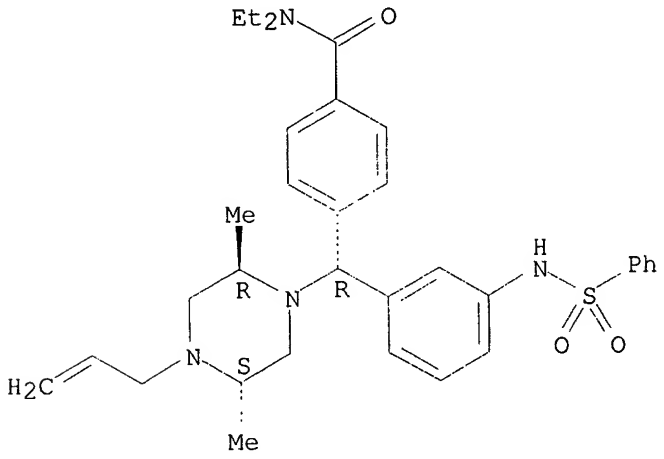
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **155766-20-4P 155766-21-5P 155773-61-8P 155806-56-7P 155893-51-9P**
(preparation and analgesic activity of)

RN 155766-20-4 USPATFULL

CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, dihydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

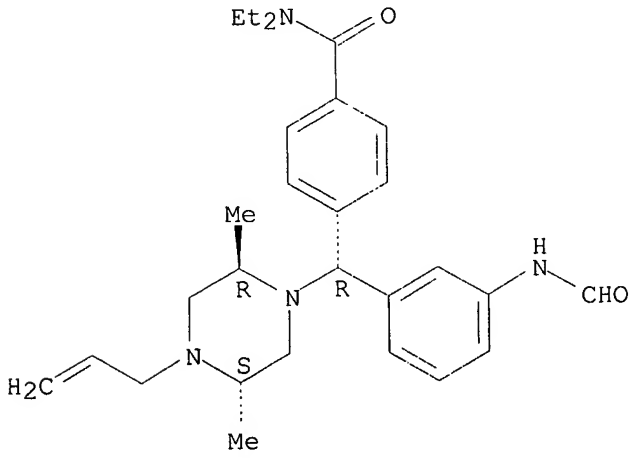


●2 HCl

RN 155766-21-5 USPATFULL

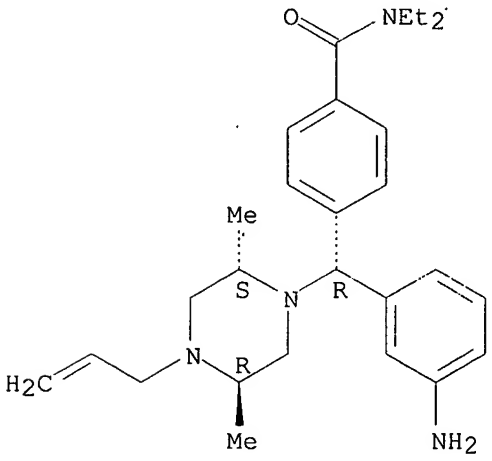
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155773-61-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

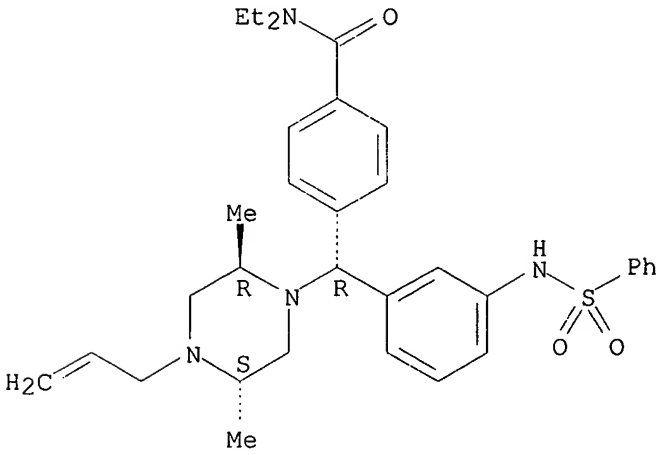
Relative stereochemistry.



● HCl

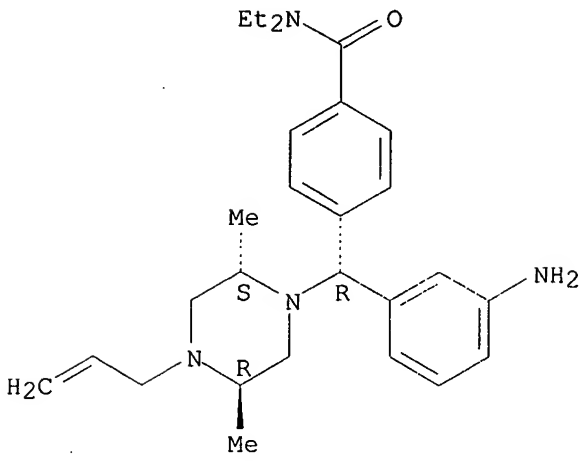
RN 155806-56-7 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



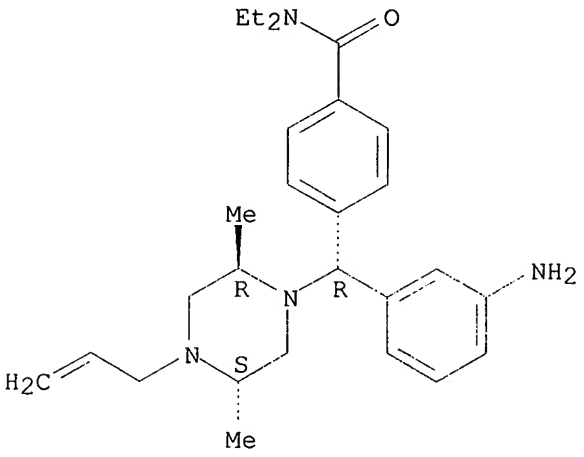
RN 155893-51-9 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



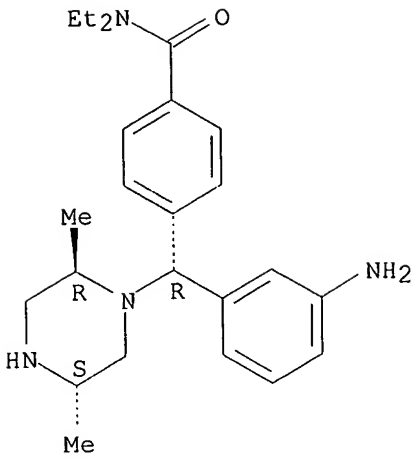
IT **155773-60-7P**
(preparation and analgesic activity of, reaction of)
RN 155773-60-7 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



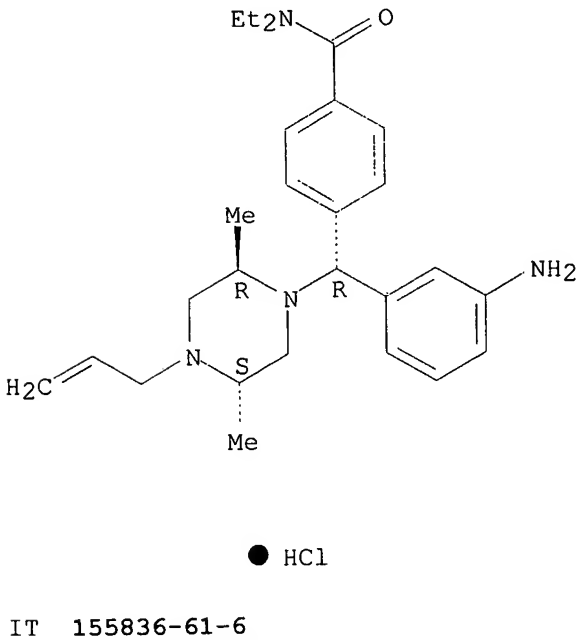
IT **155893-49-5P 155893-50-8P**
(preparation and reaction of, in preparation of analgesics)
RN 155893-49-5 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)(2,5-dimethyl-1-piperazinyl)methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-50-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

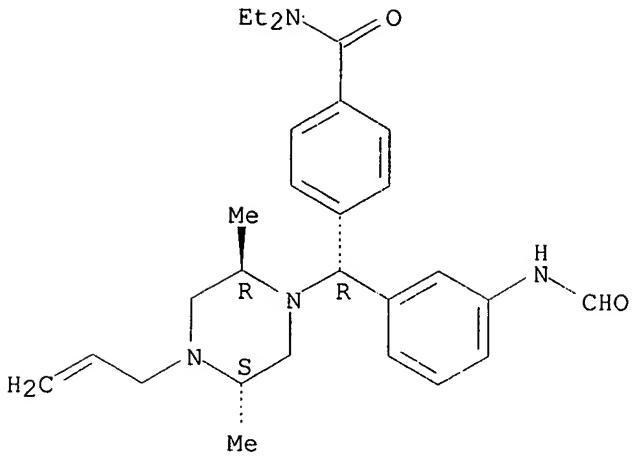
Relative stereochemistry.



● HCl

IT **155836-61-6**
(reaction of, in preparation of analgesics)
RN 155836-61-6 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

L12 ANSWER 7 OF 10 USPATFULL on STN

ACCESSION NUMBER:	1998:111938 USPATFULL		
TITLE:	Compositions and methods for reducing respiratory depression		
INVENTOR(S):	Chang, Kwen-Jen, Chapel Hill, NC, United States McNutt, Jr., Robert W., Durham, NC, United States Pettit, Hugh O., Cary, NC, United States Bishop, Michael J., Durham, NC, United States		
PATENT ASSIGNEE(S):	Delta Pharmaceutical, Inc., Chapel Hill, NC, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5807858		19980915 <--
APPLICATION INFO.:	US 1996-658726		19960605 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Rotman, Alan L.		
ASSISTANT EXAMINER:	Aulakm, Charanjit S.		
LEGAL REPRESENTATIVE:	Hultquist, Steven J., Barrett, William A.		
NUMBER OF CLAIMS:	46		
EXEMPLARY CLAIM:	1		
LINE COUNT:	2203		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to, inter alia, methods and compositions for reducing, treating or preventing respiratory depression in an animal, using a compound of the formula: ##STR1## wherein: Ar, G, Z, R.sup.2, R.sup.3, R.sup.4, R.sup.5, R.sup.6 and R.sup.7 are as defined in specification,

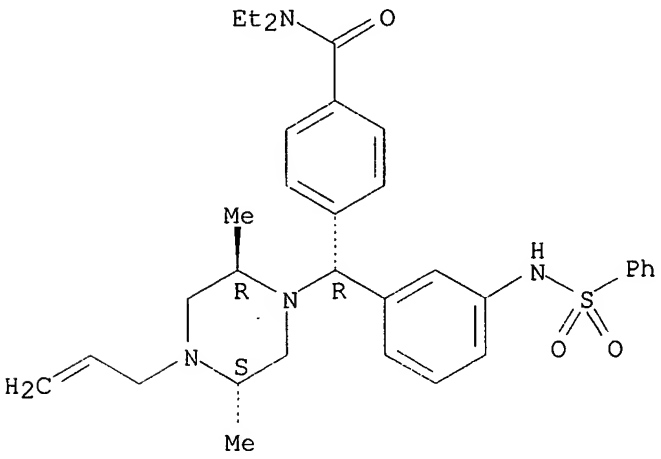
or a pharmaceutically acceptable ester or salt thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **155766-20-4P 155766-21-5P 155773-61-8P**
155806-56-7P 155893-51-9P
(preparation and analgesic activity of)

RN 155766-20-4 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, dihydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

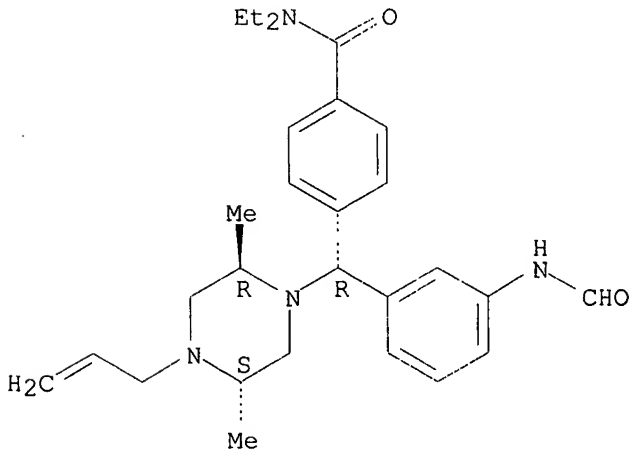
Relative stereochemistry.



●2 HCl

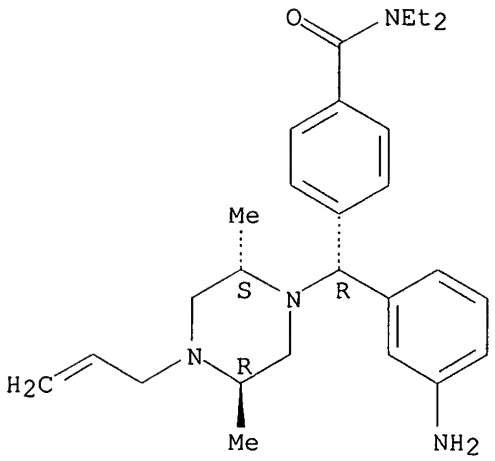
RN 155766-21-5 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155773-61-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

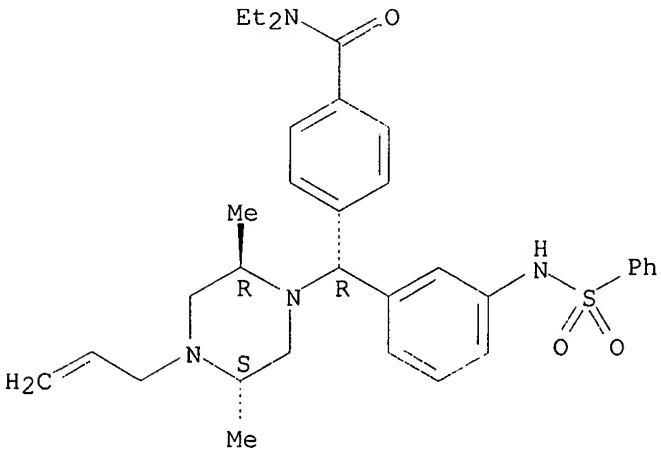
Relative stereochemistry.



● HCl

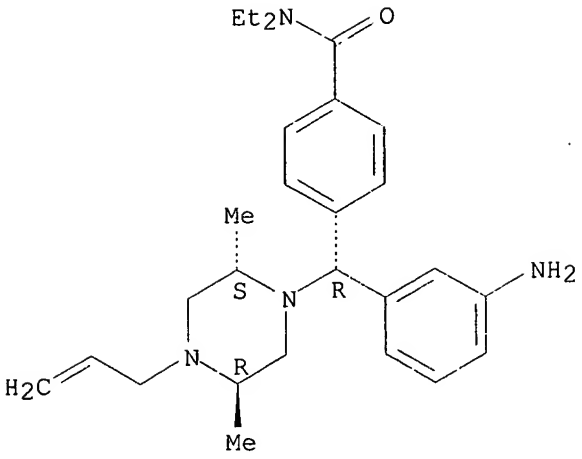
RN 155806-56-7 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



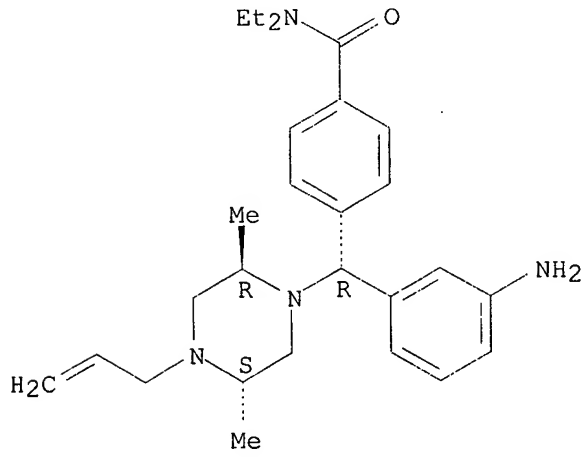
RN 155893-51-9 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



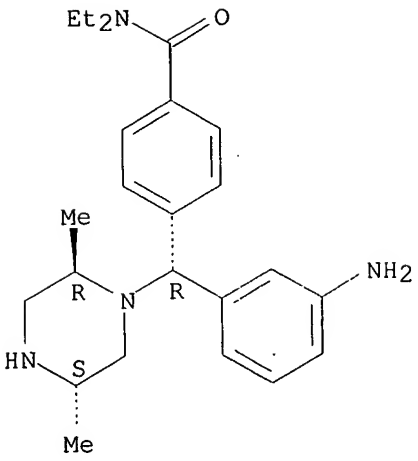
IT **155773-60-7P**
(preparation and analgesic activity of, reaction of)
RN 155773-60-7 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



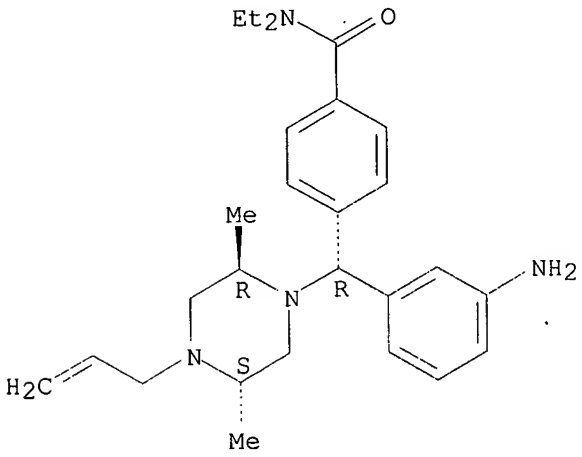
IT **155893-49-5P 155893-50-8P**
(preparation and reaction of, in preparation of analgesics)
RN 155893-49-5 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)(2,5-dimethyl-1-piperazinyl)methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-50-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

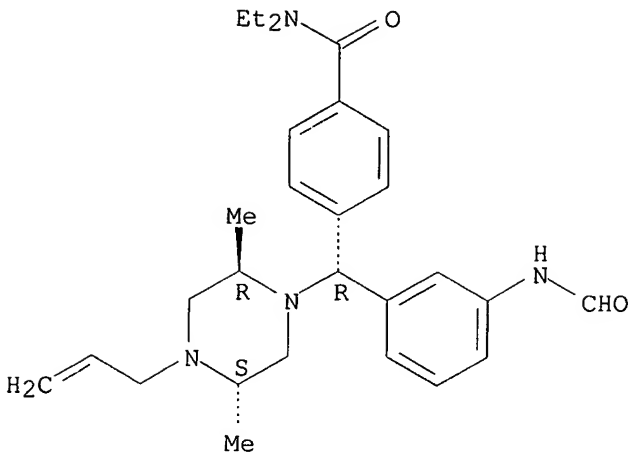
Relative stereochemistry.



● HCl

IT **155836-61-6**
(reaction of, in preparation of analgesics)
RN 155836-61-6 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

L12 ANSWER 8 OF 10 USPATFULL on STN

ACCESSION NUMBER:	97:73615 USPATFULL			
TITLE:	Opioid diarylmethylpiperazines and piperdines			
INVENTOR(S):	Chang, Kwen-Jen, Chapel Hill, NC, United States Boswell, Grady Evan, Cary, NC, United States Bubacz, Dulce Garrido, Cary, NC, United States Collins, Mark Allan, Raleigh, NC, United States Davis, Ann Otstot, Raleigh, NC, United States McNutt, Jr., Robert Walton, Durham, NC, United States			
PATENT ASSIGNEE(S):	Delta Pharmaceuticals, Inc., Chapel Hill, NC, United States (U.S. corporation)			

	NUMBER	KIND	DATE		
PATENT INFORMATION:	US 5658908		19970819		<--
	WO 9315062		19930805		<--
APPLICATION INFO.:	US 1994-284445		19940803	(8)	
	WO 1993-GB216		19930202		
			19940803	PCT 371 date	
			19940803	PCT 102(e) date	

	NUMBER	DATE	
PRIORITY INFORMATION:	GB 1992-2238	19920203	<--

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Bernhardt, Emily
LEGAL REPRESENTATIVE:	Hultquist, Steven J.
NUMBER OF CLAIMS:	26
EXEMPLARY CLAIM:	1,19,21,22
LINE COUNT:	5991

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Diarylmethylpiperazine compounds having utility as receptor-binding species, e.g., for mediating analgesia, and for combatting drug addiction, alcohol addiction, and drug overdose. The compounds may be administered orally, rectally, topically, nasally, ophthalmically, or

parenterally (subcutaneously, intramuscularly, and intravenously), for veterinary and human use, and include delta receptor and mu receptor binding species.

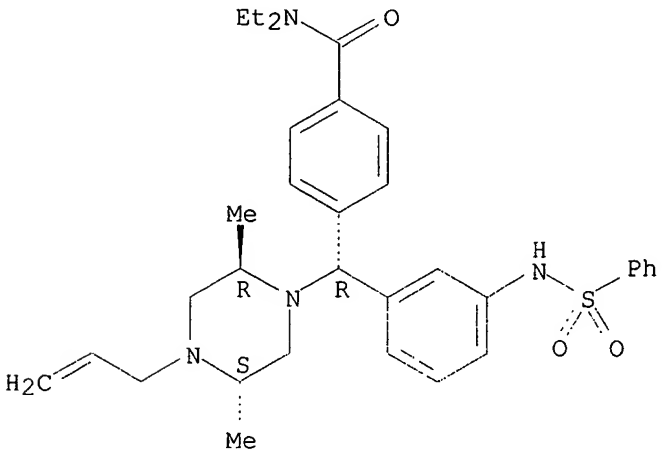
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **155766-20-4P 155766-21-5P 155773-61-8P**
155806-56-7P 155893-51-9P
(preparation and analgesic activity of)

RN 155766-20-4 USPATFULL

CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, dihydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

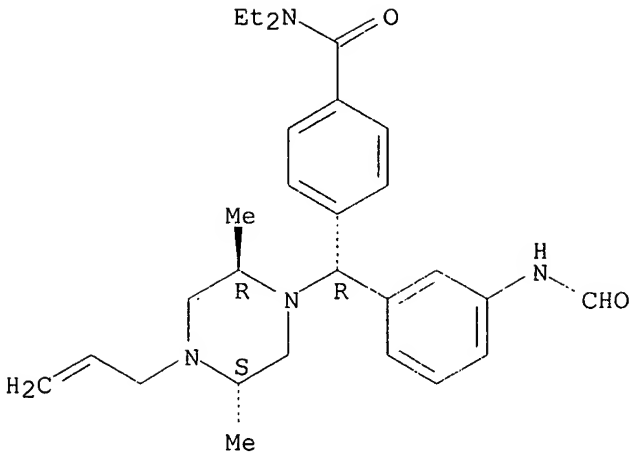


●2 HCl

RN 155766-21-5 USPATFULL

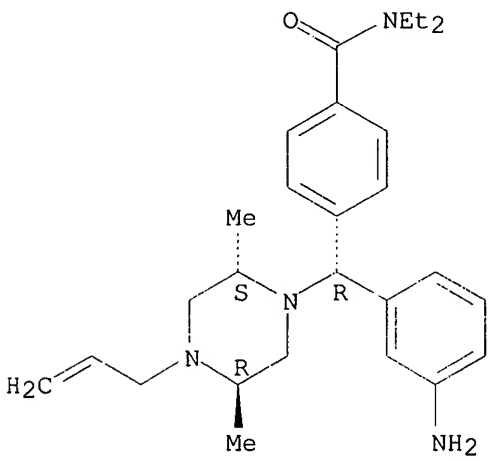
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155773-61-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

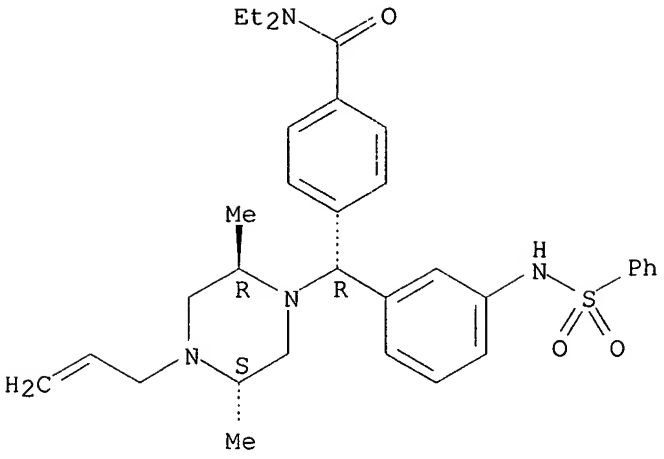
Relative stereochemistry.



● HCl

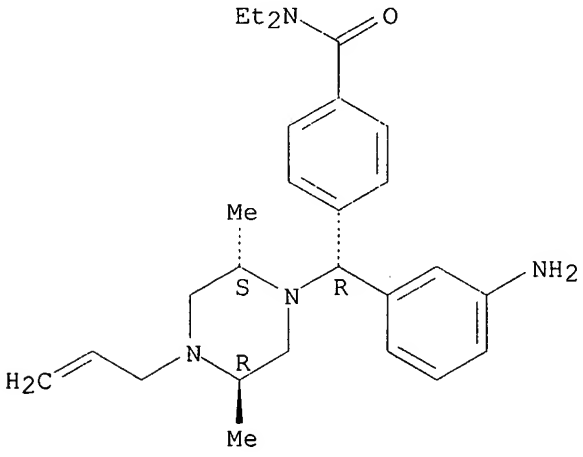
RN 155806-56-7 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



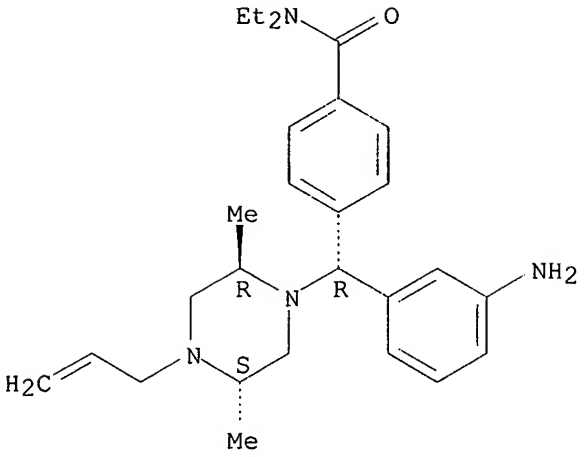
RN 155893-51-9 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



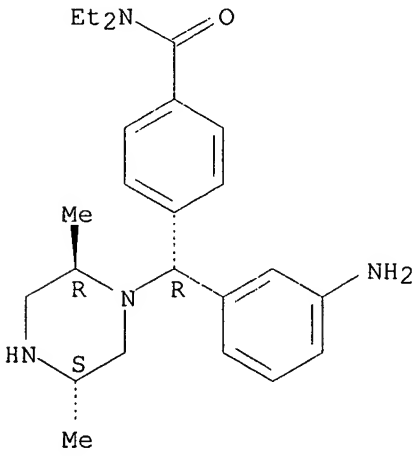
IT **155773-60-7P**
(preparation and analgesic activity of, reaction of)
RN 155773-60-7 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



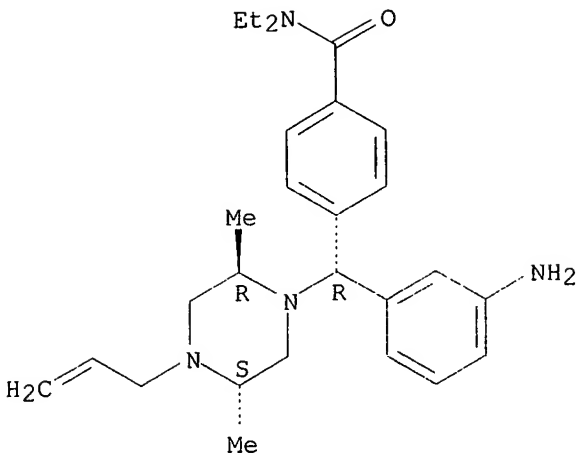
IT **155893-49-5P 155893-50-8P**
(preparation and reaction of, in preparation of analgesics)
RN 155893-49-5 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)(2,5-dimethyl-1-piperazinyl)methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-50-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

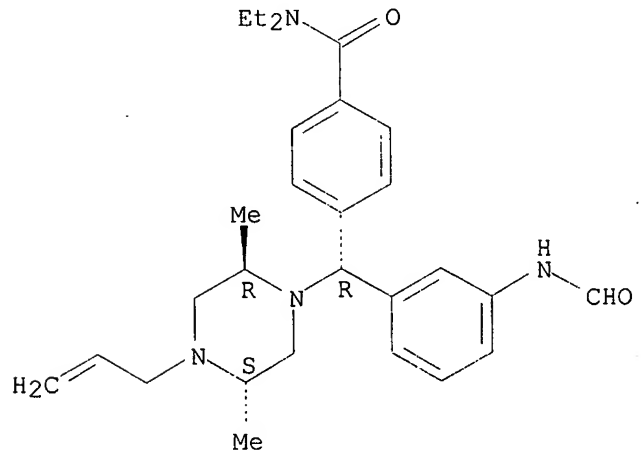
Relative stereochemistry.



● HCl

IT **155836-61-6**
(reaction of, in preparation of analgesics)
RN 155836-61-6 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

L12 ANSWER 9 OF 10 USPATFULL on STN
ACCESSION NUMBER: 96:104120 USPATFULL
TITLE: Opioid compounds and methods for making therefor
INVENTOR(S): Chang, Kwen-Jen, Chapel Hill, NC, United States
Bubacz, Dulce G., Cary, NC, United States

	Davis, Ann O., Raleigh, NC, United States McNutt, Jr., Robert W., Durham, NC, United States Bishop, Michael J., Durham, NC, United States
PATENT ASSIGNEE(S):	Delta Pharmaceuticals, Inc., Chapel Hill, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5574159		19961112	<--
APPLICATION INFO.:	US 1995-430677		19950428 (8)	
RELATED APPLN. INFO.:	Division of Ser. No. US 1994-285313, filed on 3 Aug 1994 which is a continuation-in-part of Ser. No. US 1993-169879, filed on 17 Dec 1993, now abandoned which is a continuation-in-part of Ser. No. US 1993-98333, filed on 30 Jul 1993, now abandoned			

	NUMBER	DATE	
PRIORITY INFORMATION:	GB 1992-2238	19920203	<--
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Ford, John M.		
ASSISTANT EXAMINER:	Sripada, Pavanaram K.		
LEGAL REPRESENTATIVE:	Hultquist, Steven J.		
NUMBER OF CLAIMS:	8		
EXEMPLARY CLAIM:	1		
LINE COUNT:	3425		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Diarylmethyl piperazine compounds having utility as exogenous receptor combinant species for binding with receptors such as delta, mu, sigma, and/or kappa receptors are disclosed. Compounds of the invention may be employed as conjugates in agonist/antagonist pairs for transductional monitoring and assays of neurotransmitter function, and also variously exhibit therapeutic utility, including mediating analgesia, and possessing utility for the treatment of diarrhea, urinary incontinence, mental illness, drug and alcohol addiction/overdose, lung edema, depression, asthma, emphysema, cough, and apnea, respiratory depression, cognitive disorders, emesis and gastrointestinal disorders.

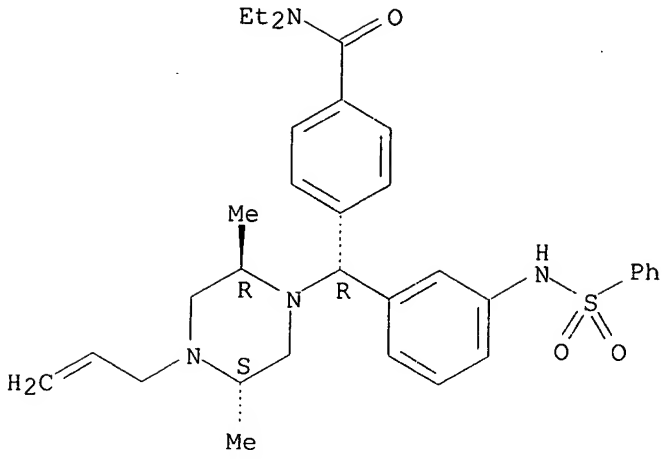
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **155766-20-4P 155766-21-5P 155773-61-8P**
155806-56-7P 155893-51-9P
(preparation and analgesic activity of)

RN 155766-20-4 USPATFULL

CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, dihydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

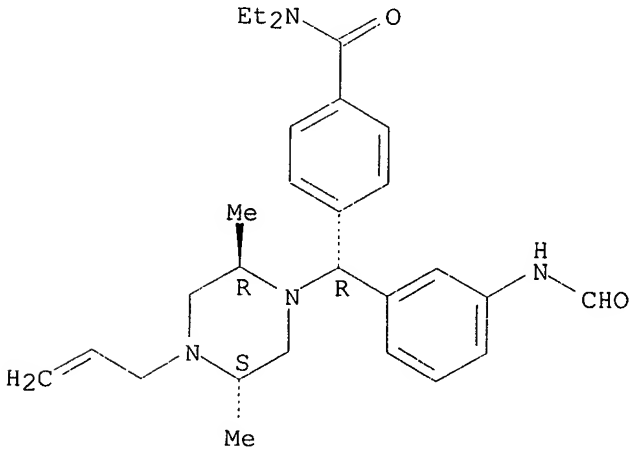
Relative stereochemistry.



●2 HCl

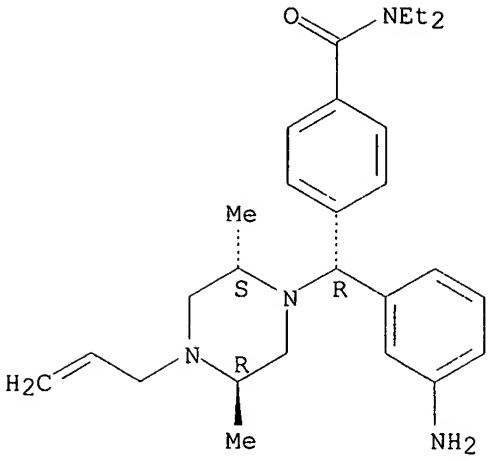
RN 155766-21-5 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]-(9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155773-61-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

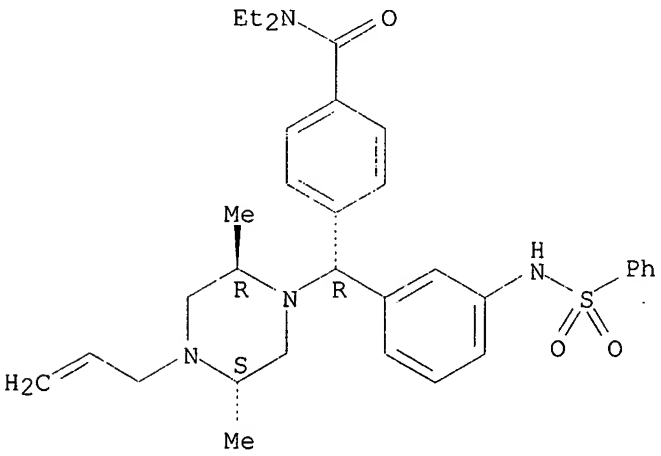
Relative stereochemistry.



● HCl

RN 155806-56-7 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-51-9 USPATFULL
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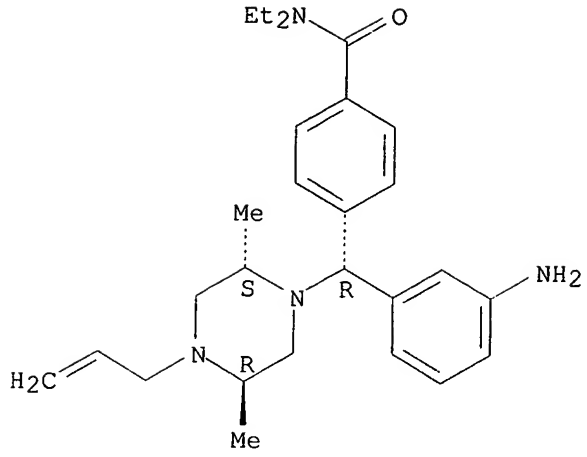
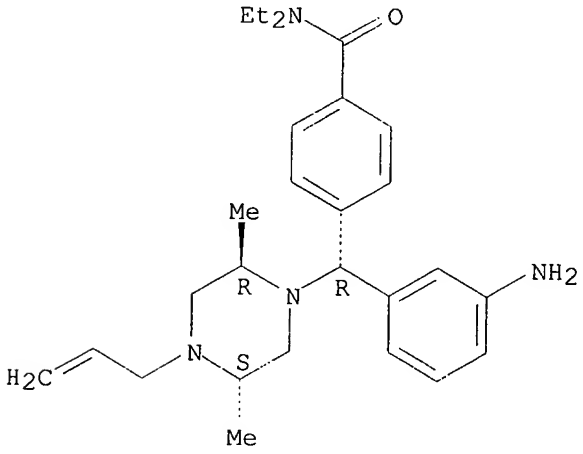
Relative stereochemistry.



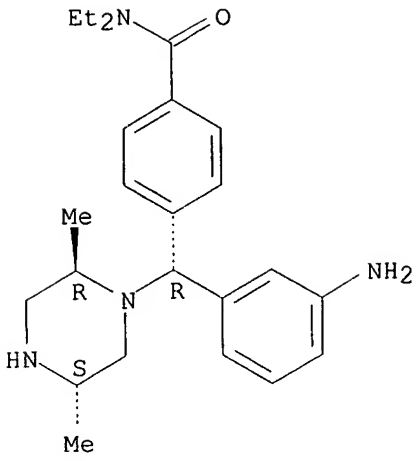
IT **155773-60-7P**
(preparation and analgesic activity of, reaction of)
RN 155773-60-7 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



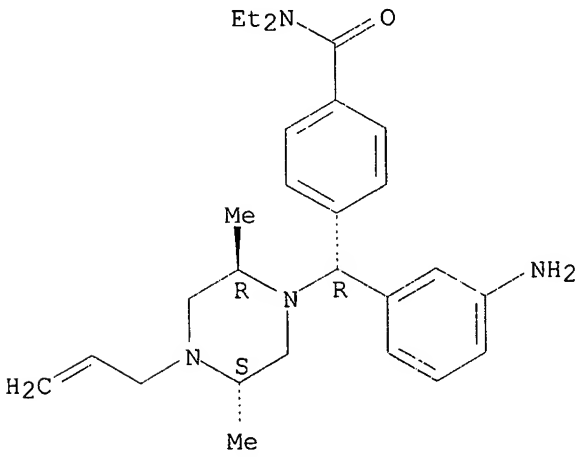
IT **155893-49-5P 155893-50-8P**
(preparation and reaction of, in preparation of analgesics)
RN 155893-49-5 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)(2,5-dimethyl-1-piperazinyl)methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-50-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

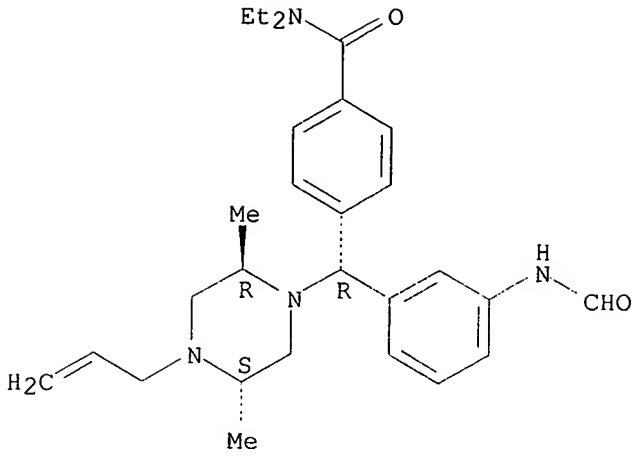
Relative stereochemistry.



● HCl

IT **155836-61-6**
(reaction of, in preparation of analgesics)
RN 155836-61-6 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

L12 ANSWER 10 OF 10 USPATFULL on STN

ACCESSION NUMBER:	96:80271 USPATFULL
TITLE:	Opioid compounds and methods for using same
INVENTOR(S):	Chang, Kwen-Jen, Chapell Hill, NC, United States Bubacz, Dulce G., Cary, NC, United States Davis, Ann O., Raleigh, NC, United States McNutt, Jr., Robert W., Durham, NC, United States Bishop, Michael J., Durham, NC, United States
PATENT ASSIGNEE(S):	Delta Pharmaceuticals, Inc., Chapel Hill, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5552404		19960903	<--
APPLICATION INFO.:	US 1995-431377		19950428 (8)	

RELATED APPLN. INFO.: Division of Ser. No. US 1994-285313, filed on 3 Aug 1994 which is a continuation-in-part of Ser. No. US 1993-169879, filed on 17 Dec 1993, now abandoned which is a continuation-in-part of Ser. No. US 1993-98333, filed on 30 Jul 1993, now abandoned

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Cintins, Marianne M.
ASSISTANT EXAMINER:	MacMillan, Keith
LEGAL REPRESENTATIVE:	Hultquist, Steven J.
NUMBER OF CLAIMS:	20
EXEMPLARY CLAIM:	1
LINE COUNT:	3527

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Diarylmethyl piperazine compounds having utility as exogenous receptor combinant species for binding with receptors such as delta, mu, sigma, and/or kappa receptors are disclosed. Compounds of the invention may be employed as conjugates in agonist/antagonist pairs for transductional monitoring and assays of neurotransmitter function, and also variously exhibit therapeutic utility, including mediating analgesia, and possessing utility for the treatment of diarrhea, urinary incontinence,

mental illness, drug and alcohol addiction/overdose, lung edema, depression, asthma, emphysema, cough, and apnea, respiratory depression, cognitive disorders, emesis and gastrointestinal disorders.

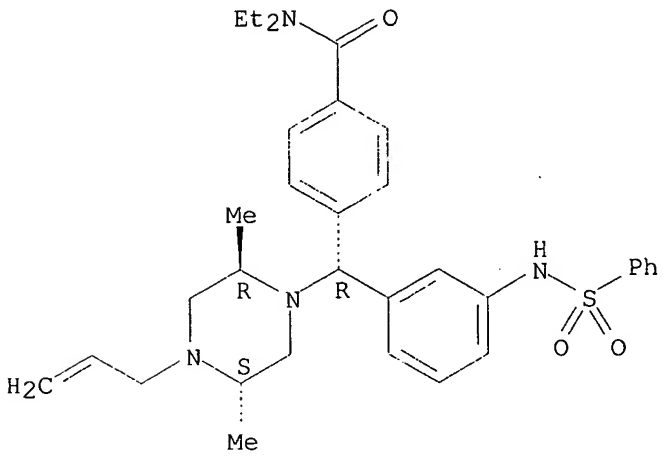
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **155766-20-4P 155766-21-5P 155773-61-8P 155806-56-7P 155893-51-9P**
(preparation and analgesic activity of)

RN 155766-20-4 USPATFULL

CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, dihydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

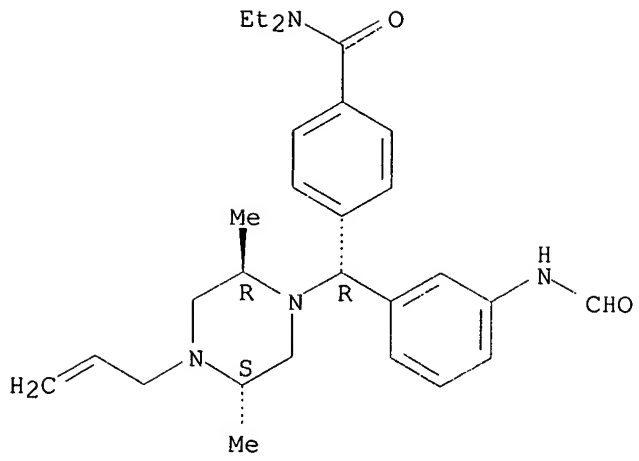


●2 HCl

RN 155766-21-5 USPATFULL

CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155773-61-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

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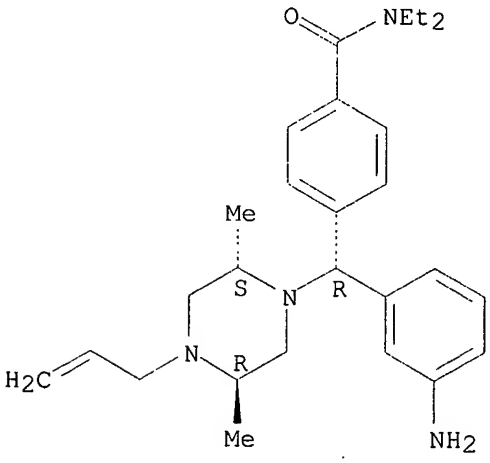
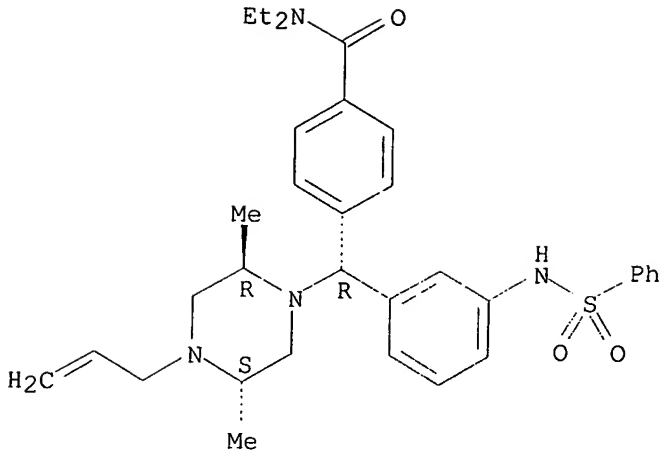


● HCl

RN 155806-56-7 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-[(phenylsulfonyl)amino]phenyl]methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-51-9 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, [1(S*),2α,5β]- (9CI) (CA INDEX NAME)

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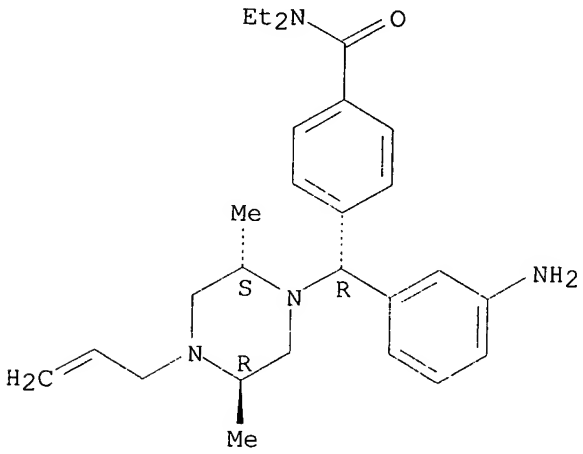

IT **155773-60-7P**
(preparation and analgesic activity of, reaction of)
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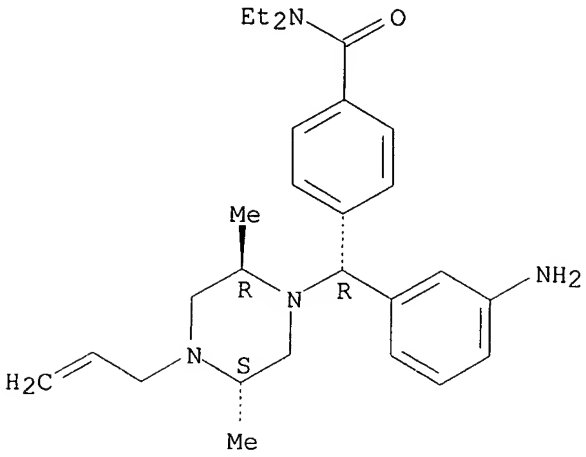
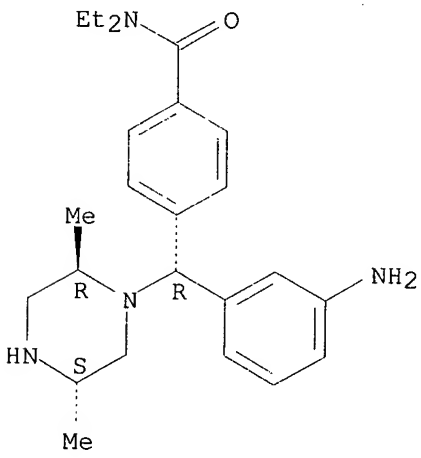


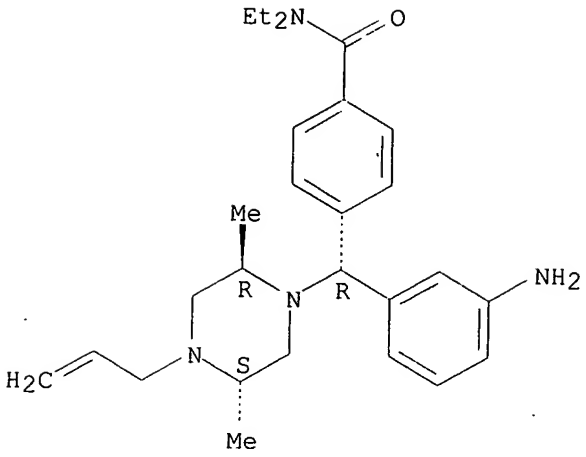
IT **155893-49-5P 155893-50-8P**
(preparation and reaction of, in preparation of analgesics)
RN 155893-49-5 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)(2,5-dimethyl-1-piperazinyl)methyl]-N,N-diethyl-, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 155893-50-8 USPATFULL
CN Benzamide, 4-[(3-aminophenyl)[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

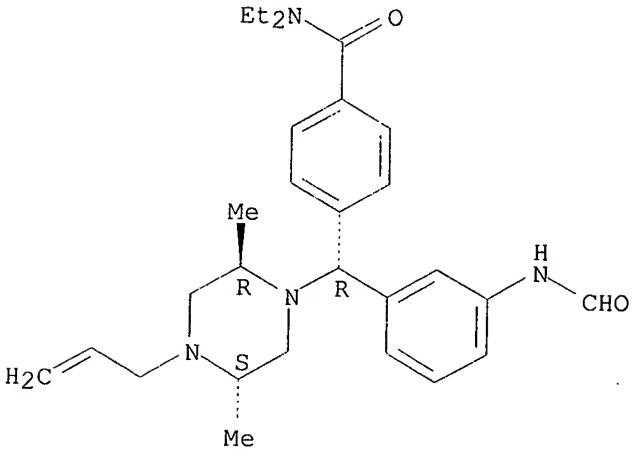
Relative stereochemistry.



● HCl

IT **155836-61-6**
(reaction of, in preparation of analgesics)
RN 155836-61-6 USPATFULL
CN Benzamide, 4-[[2,5-dimethyl-4-(2-propenyl)-1-piperazinyl][3-(formylamino)phenyl]methyl]-N,N-diethyl-, monohydrochloride, [1(R*),2α,5β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

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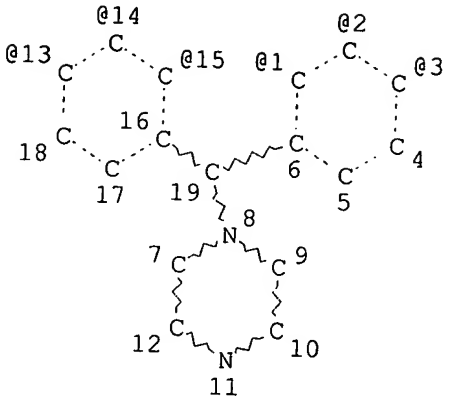

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VPA 22-13/14/15 U
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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE
L9 309 SEA FILE=REGISTRY SSS FUL L7
L10 6 SEA FILE=HCAPLUS ABB=ON L9
L11 6 SEA FILE=HCAPLUS ABB=ON L10 AND (PRD<20050504 OR PD<20050504)

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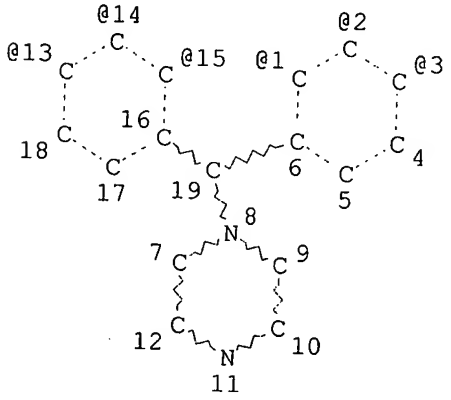

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VPA 22-13/14/15 U
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

L9 309 SEA FILE=REGISTRY SSS FUL L7
L10 6 SEA FILE=HCAPLUS ABB=ON L9
L12 10 SEA FILE=USPATFULL ABB=ON L10 AND (PRD<20050504 OR PD<20050504
)